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# Petroleum Supply Monthly



November 1983

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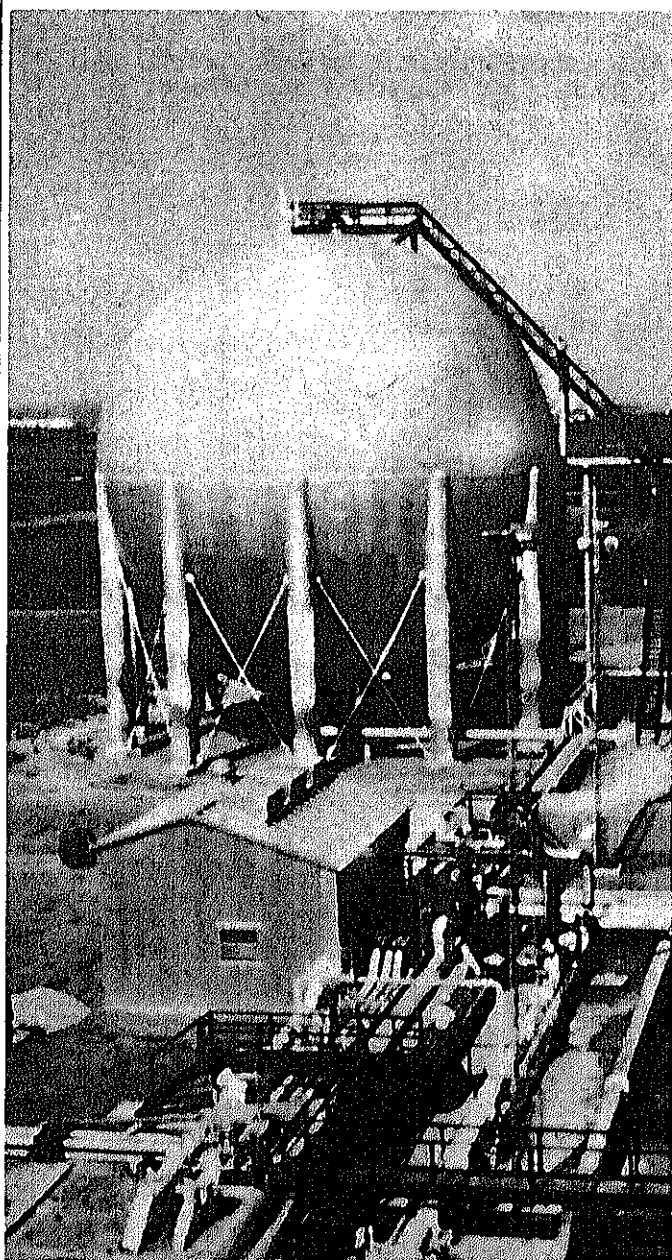




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## This Month in the PSM

Background data relating to Liquefied Petroleum Gas (LPG) are discussed in this month's *Petroleum Supply Monthly*. International developments, U.S. trends, and EIA's projections for the near future and the longer term are included in the Petroleum Focus article, "LPG Market Trends," beginning on page ix. This article is supplemented by a "box" appearing on page xi that presents some common LPG terminology and a simplified diagram illustrating the flow between LPG sources and processing stages.



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# **Petroleum Focus**





# Petroleum Supply Summary

Average Volume for Period (Million Barrels Per Day)	October			Cumulative January Through October		
	1983	1982	% Change	1983	1982	% Change
Total Product Supplied	15.4	14.9	3.7	15.0	15.3	- 1.7
Motor Gasoline	6.7	6.4	5.1	6.6	6.5	1.1
Distillate Fuel Oil	2.6	2.6	- 0.2	2.6	2.7	- 3.0
Residual Fuel Oil	1.3	1.5	- 11.9	1.4	1.7	- 19.6
Crude Inputs to Refineries	11.8	11.7	0.3	11.7	11.8	- 1.0
Crude Oil and Natural Gas Liquids Production	10.3	10.2	2.0	10.2	10.2	0.4
Net Imports <sup>1</sup>	4.8	4.4	9.7	4.2	4.3	- 1.4
Net Crude Oil Imports <sup>2</sup>	3.4	3.2	6.6	2.9	3.1	- 5.4
SPR Imports	0.2	0.2	- 1.4	0.2	0.2	45.8
Net Product Imports	1.2	1.0	22.2	1.1	1.0	2.8
Crude Oil Stock Withdrawal <sup>2</sup>	- 0.05	- 0.33	—	- 0.01	0.04	—
Product Stock Withdrawal	0.16	- 0.05	—	0.14	0.31	—
Stocks at End of Period (Million Barrels)						
Crude Oil <sup>2</sup>	353	351	NM			
Motor Gasoline <sup>3</sup>	222	234	NM			
Distillate Fuel Oil	162	170	NM			
Residual Fuel Oil	47	64	NM			
Total Product	771	797	NM			
SPR	367	285	29.1			
Total	1,491	1,432	NM			

<sup>1</sup>Gross Imports of crude oil including Strategic Petroleum Reserve (SPR) and petroleum products less exports of crude oil and petroleum products.

<sup>2</sup>Excluding SPR.

<sup>3</sup>Including blending components.

NM = Not meaningful due to new stock basis.

Note: Percent changes are based on unrounded values. October 1983 data are estimates based on weekly data, except for export and Natural Gas Liquids Production estimates which are September 1983 monthly values. Totals may not be equal to sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, November 1983.





# LPG Market Trends

The Energy Information Administration (EIA) collects information and data relating to liquefied petroleum gas (LPG) in various surveys, such as the Monthly Natural Gas Liquids Report, the Monthly Refinery Report, the Monthly Petroleum Product Sales Report, and annual Sales of Liquefied Petroleum Gases. National, regional, and some State data from these surveys are published in the *Petroleum Supply Monthly*, *Petroleum Supply Annual*, *Petroleum Marketing Monthly*, *Monthly Energy Review*, and other EIA publications. This article presents an analysis of recent developments in the LPG market and projections for both the near term and longer term based on these data.

## Free World LPG Market

During the past decade most of the growth in Free World LPG supply occurred in the Middle East, North Africa, and Indonesia, while consumption increases were most significant in Japan and Western Europe. In recent years, sizeable trade relationships developed between producing and consuming nations. Meanwhile, the United States has remained virtually self-sufficient with regard to LPG. Consumption in the United States has been met predominantly by domestic production, and this country has had relatively little participation in the Free World market.

According to EIA's latest *Annual Energy Outlook*,<sup>1</sup> Free World energy consumption through 1990 is expected to grow at a rate of about 1 to 2 percent per year in the industrialized countries, with some faster growth in the developing economies. In the United States, the average annual growth rate for energy consumption through 1990 is projected to be slightly less than 2 percent, while the rate for LPG consumption growth is projected to be slightly above 2 percent.

Consumption in Japan, the second largest consumer of LPG in the Free World, is expected to increase to meet growing industrial needs and to fuel automobiles and trucks, to reduce pollution in metropolitan areas. Consumption in Western Europe is also expected to experience some limited growth, primarily in the industrial sector.

## U.S. Long Term LPG Market

According to EIA's *Annual Energy Outlook*, the industrial sector, including petrochemical feedstocks, is expected to remain the largest consumer of LPG in the United States through 1990. Nationwide, this is the only economic sector in which significant LPG consumption increases are expected during this period. Growth in LPG use for feedstock purposes is expected to more than offset declining fuel and power uses in this sector.

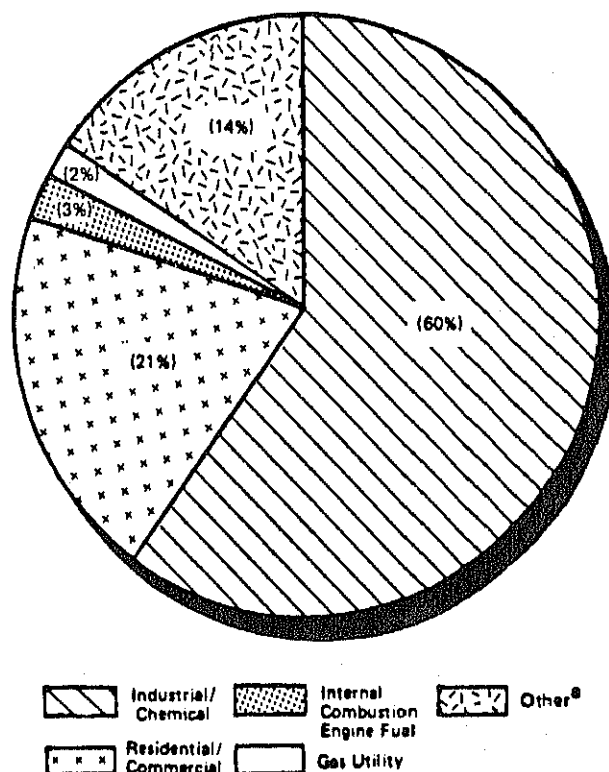
Again at the national level, consumption by the residential/commercial sector is expected to remain constant for the next few years, with a slight decline near the end of the decade, as electricity and other energy forms replace LPG use in homes.

No significant growth is projected for transportation use of LPG at the national level. However, some analysts believe there is considerable potential for development in local transportation markets.

## Current Usage Patterns

EIA's latest *Petroleum Supply Annual*<sup>2</sup> shows about 60 percent of total U.S. LPG sales in 1982 were to the industrial/chemical sector, while about 21 percent went to the residential/commercial sector. The chemical market was the largest single end-use component, with 49 percent of 1982 sales (see Figure 1).

Figure 1. Sales of Liquefied Petroleum Gases by End Use, 1982.



<sup>2</sup>Includes farm use, use as synthetic natural gas feedstock, and use in crude oil secondary recovery projects.  
Source: Form EIA-174.

<sup>1</sup>Energy Information Administration, 1982 *Annual Energy Outlook*, DOE/EIA 0383(82), April 1983.

<sup>2</sup>Energy Information Administration, *Petroleum Supply Annual 1982*, DOE/EIA-0340(82)/1, June 1983.

EIA's most recent *Residential Energy Consumption Survey*<sup>1</sup> shows that nationwide, 1 out of 11 U.S. households used LPG during the year ending March 1982. In about half of these households, LPG was the main heating fuel and consumption averaged about 730 gallons for the survey period.

### Short-Term Projections

Projections from EIA's latest *Short-Term Energy Outlook*,<sup>4</sup> cover the 1983-84 heating season and extend through the end of 1984. The following are some highlights from that report:

- U.S. crude oil consumption is expected to bottom out in 1983 and begin rising again through 1984. In contrast, world crude oil consumption in 1984 is expected to decline for the fourth consecutive year.
- Assuming flat world crude oil prices, petroleum product prices in the United States are expected to remain relatively stable through 1984.
- Prices of natural gas and electricity for residential use in 1984 are projected to average 7 to 8 percent above year-earlier levels, in nominal terms.
- The U.S. economic recovery that began early in 1983 is expected to continue through 1984. The recovery is expected to result in increased energy consumption during the fourth quarter of 1983, contingent upon a return to normal winter weather.
- LPG consumption in the United States is expected to remain essentially unchanged during 1984 and to follow normal seasonal patterns.

These projections are based on the best information available, however, changing conditions at home and abroad can dramatically change markets for individual energy sources. For example, recent petroleum supply data<sup>5</sup> show how events in the world LPG market can affect the domestic propane market:

- The United States used about 800,000 barrels of propane per day during 1981 and 1982, excluding mixes.
- Prior to October 1981, propane exports were restricted, and the United States exported less than 10,000 barrels per day, equivalent to about 1 percent of U.S. consumption.
- Following the relaxation of export restrictions, propane exports grew, and in 1982, averaged about

30,000 barrels per day, equivalent to 4 percent of domestic consumption.

- In the first quarter of 1983, U.S. propane exports climbed to 70,000 barrels per day, equivalent to about 8 percent of domestic consumption. This growth is attributed to the anticipation of a shortfall of propane on the world market when a major supplier, Saudi Arabia, reduced its crude oil production to alleviate a world over-supply of crude oil. Japan, and other users of Saudi Arabian propane, sought alternate sources of supply on the open market. U.S. producers met some of that demand.
- The volume of U.S. exports was equivalent to less than 10 percent of U.S. consumption. Although the surge in exports lasted only a few months, it was sufficient to have an impact on domestic stocks and prices.
- During the first quarter of 1983, U.S. stocks of propane were drawn down by about 6 million barrels to meet this level of exports. This drawdown was in addition to normal winter withdrawals and, as a result, U.S. propane stocks dropped to 41 million barrels in April 1983, their lowest level in years. During the same period, propane prices on the U.S. spot market rose to around 50 cents per gallon, up from 30 to 40 cents per gallon a year earlier.
- U.S. exports of propane dropped back to about 25,000 barrels per day by June, and by August, stocks were rebuilt to about 60 millions barrels, almost as high as 1 year earlier levels. However, spot prices remained around 50 cents per gallon.

These events suggest that while the United States is self-sufficient in LPG supply, this nation is nevertheless subject to the influence of the world marketplace. Volumes of LPG's that appear small when viewed from a national perspective can have a significant impact on prices and availability. While EIA expects adequate supplies and relatively stable prices in the near term, disruptions of supplies to other major consuming nations could bring a return to tight market conditions and upward pressures on U.S. prices.

<sup>1</sup>Energy Information Administration, *Residential Energy Consumption Survey*, DOE/EIA-0321/1(81), September 1983.

<sup>4</sup>Energy Information Administration, *Short Term Energy Outlook*, DOE/EIA-0202(83/3Q) August 1983.

<sup>5</sup>See "Summary Statistics" *Petroleum Supply Annual* (1981 and 1982) and *Petroleum Supply Monthly* (1983).

### Changes in LPG Reporting

The Energy Information Administration plans to institute changes to Natural Gas Liquids (NGL) and Liquefied Petroleum Gases (LPG) data surveys to simplify reporting and to improve the quality of NGL and LPG statistics. These changes were developed through the cooperation of survey respondents and data users in industry, Federal and State governments and academic institutions.

Beginning in January 1984 statistics will be reported by component (propane, butane, isobutane, ethane, and pentanes-plus). The reporting of ethane-propane mix, butane-propane mix and unfractionated streams which has led to misclassification and overcounting will be eliminated. A detailed description of the changes will be contained in the January 1984 "Petroleum Supply Monthly".

## Liquefied Petroleum Gas Terminology

Hydrocarbon liquids condensed from natural gas are known as natural gas liquids (NGL). They include the lighter liquids: ethane, propane, and butane, and mixtures of these compounds. Heavier NGL's, extracted at natural gas processing plants, include natural gasoline, plant condensate, and pentanes plus. "Liquefied petroleum gas" (LPG) as used in the accompanying article, includes all ethane, propane, butane, and isobutane condensed from natural gas or liquefied at refineries. The term "LPG" is used in a narrower context in the industry to denote propane, butane, and mixtures consisting mainly of these compounds.

The simplified flow diagram below illustrates the flow between LPG sources and processing stages. About 80 percent of LPG production comes from natural gas processing, shown on the top half of the diagram. The remaining production stems from refinery processing of crude oil. Condensate produced at gas wells (lease condensate) generally merges with the crude oil stream and EIA data include it as part of that stream. In contrast, EIA data include condensate which originates at gas processing plants (plant condensate) with NGL production rather than with crude oil production.

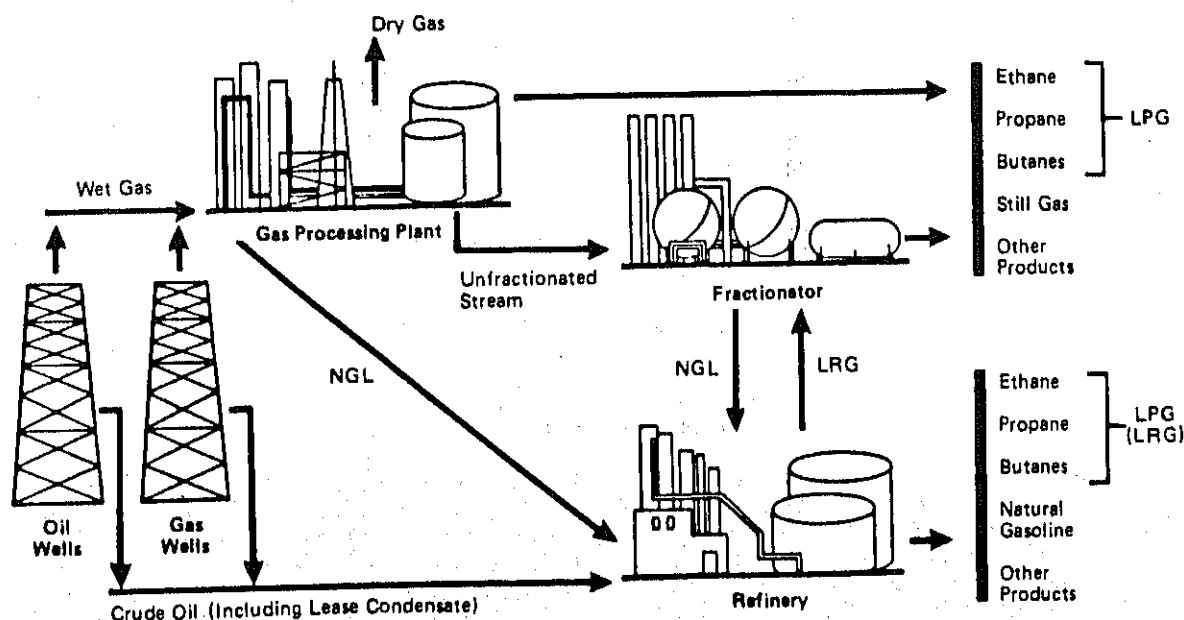
NGL's are recovered from "wet" gas streams at gas processing plants. Some plants yield "unfractionated streams," or NGL mixes, that are further processed at fractionators to yield ethane, propane, and butane.

Large quantities of natural gas liquids flow from gas processing plants and fractionators to refineries. These liquids consist principally of LPG's and heavier NGL's. Smaller amounts of liquefied refinery gases flow from refineries to fractionators for processing. The term "liquefied refinery gas," or LRG, is sometimes used to denote LPG produced at refineries.

LPG's have become an increasingly important part of the energy picture over the last decade; among petroleum products, only motor gasoline and distillate fuel oil substantially exceed LPG usage. Chemical feedstock is the principal non-energy use for LPG and currently accounts for about half of LPG sales. LPG is also used as fuel or gasoline blending components within the petroleum industry, accounting for about 15 percent of total LPG supply.

There are distinct uses for individual LPG products. Ethane, the lightest LPG, is used primarily as a petrochemical feedstock. Propane, which constitutes the largest portion of LPG production, serves as an energy source for residential, commercial, and industrial users, and is also used as a petrochemical feedstock. LPG mixes consist principally of ethane-propane mixes destined for the petrochemical sector. More than half of the butane is blended into gasoline and nearly all of the isobutane is used in manufacturing gasoline blending components.

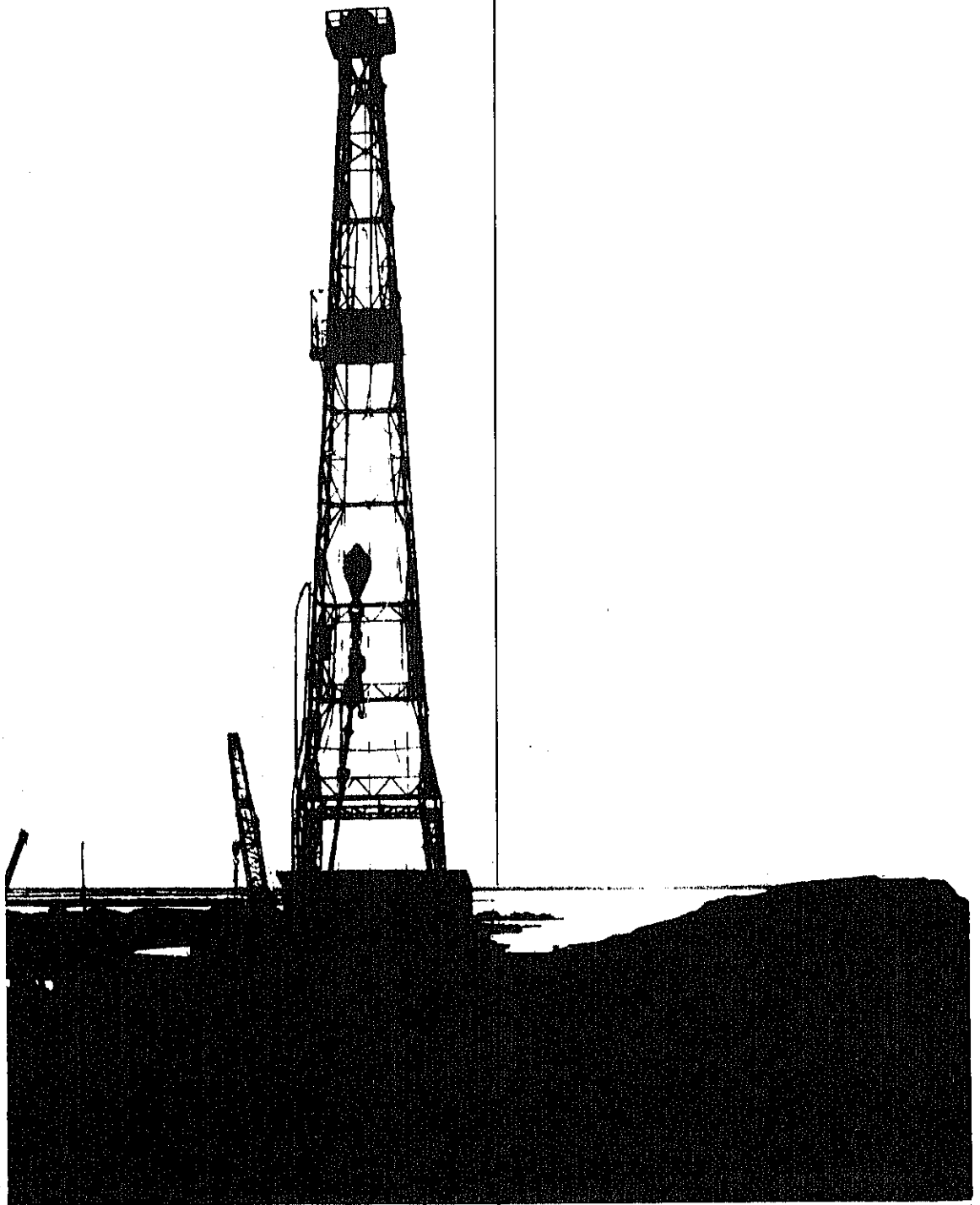
LPG Sources and Processing Stages



Source: Energy Information Administration



# Summary Statistics



# Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>			Ending Stocks <sup>3</sup>
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>5</sup> and Petroleum Products
Thousand Barrels per Day								Million Barrels
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	<sup>6</sup> 1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	<sup>6</sup> 1,392
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-832	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428
	March	10,284	8,667	1,572	121	1,047	15,560	1,392
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346
	May	10,244	8,683	1,518	29	-66	14,847	1,347
	June	10,212	8,646	1,511	40	-489	14,998	1,360
	July	10,229	8,658	1,513	-147	-926	14,821	1,393
	August	10,215	8,634	1,524	-440	-44	14,839	1,408
	September	10,279	8,701	1,518	263	-447	15,022	1,414
	October	10,299	8,701	1,530	-548	-47	14,859	1,432
	November	10,359	8,697	1,609	-398	-361	15,009	1,455
	December	10,276	8,598	1,628	128	688	15,487	<sup>6</sup> 1,430
	AVERAGE	10,252	8,649	1,550	-136	283	15,296	
1983	January	10,356	8,634	1,668	-567	865	14,765	1,453
	February	10,298	8,660	1,585	-382	1,128	14,772	1,432
	March	10,259	8,677	1,544	56	1,765	15,484	1,375
	April	10,229	8,686	1,502	-438	431	14,779	1,376
	May	10,231	8,682	1,483	68	-759	14,250	1,397
	June	10,262	8,676	1,514	-163	-242	15,281	1,409
	July	10,237	8,647	1,536	118	-922	14,913	1,434
	August	10,257	8,653	1,561	-781	-289	15,366	1,467
	September*	10,323	8,666	1,598	R -191	R -634	R 15,396	R 1,492
	October**	NA	8,654	NA	-270	163	15,408	1,491
	AVERAGE	NA	8,663	NA	-254	144	15,043	

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Stocks are totals as of end of period.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years.

The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-1,121, 1980-1,420 and 1982-1,462.

Stock withdrawals during 1975, 1981 and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.1.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil<sup>1</sup> and Petroleum Products Overview ( continued )

		Imports			Exports			Net <sup>3</sup> Imports
		Total	Crude Oil <sup>2</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
1973	AVERAGE	6,256	3,244	3,012	231	2	229	6,025
1974	AVERAGE	6,112	3,477	2,635	221	3	218	5,892
1975	AVERAGE	6,056	4,105	1,951	209	6	204	5,846
1976	AVERAGE	7,313	5,287	2,026	223	8	215	7,090
1977	AVERAGE	8,807	6,615	2,193	243	50	193	8,565
1978	AVERAGE	8,363	6,356	2,008	362	158	204	8,002
1979	AVERAGE	8,456	6,519	1,937	472	235	237	7,984
1980	AVERAGE	6,909	5,263	1,646	544	287	258	6,365
1981	January	6,827	4,932	1,895	558	339	219	6,270
	February	6,772	4,873	1,899	569	198	371	6,203
	March	6,028	4,521	1,507	586	210	376	5,442
	April	5,668	4,338	1,330	570	198	372	5,098
	May	5,775	4,287	1,489	595	312	283	5,180
	June	5,435	4,061	1,375	420	123	297	5,015
	July	5,816	4,296	1,521	571	257	314	5,245
	August	5,767	4,179	1,588	644	204	440	5,123
	September	6,365	4,740	1,624	519	194	325	5,845
	October	5,959	4,380	1,579	738	226	512	5,221
	November	5,741	4,046	1,695	701	278	423	5,041
	December	5,843	4,137	1,706	656	189	467	5,187
	AVERAGE	5,996	4,396	1,599	595	228	367	5,401
1982	January	5,332	3,693	1,639	829	238	591	4,503
	February	4,807	2,990	1,817	804	304	499	4,003
	March	4,484	2,874	1,610	882	321	561	3,602
	April	4,378	2,849	1,529	786	174	611	3,593
	May	4,811	3,309	1,503	803	262	542	4,008
	June	5,327	3,836	1,491	703	94	609	4,624
	July	5,890	4,248	1,642	741	229	512	5,149
	August	5,244	3,851	1,392	858	304	554	4,386
	September	5,414	3,636	1,778	791	184	606	4,624
	October	5,306	3,670	1,636	932	270	662	4,374
	November	5,744	3,862	1,882	786	262	524	4,958
	December	4,606	3,000	1,605	860	193	667	3,746
	AVERAGE	5,113	3,488	1,625	815	236	579	4,298
1983	January	4,372	2,938	1,434	973	117	856	3,399
	February	3,691	2,268	1,423	865	262	603	2,825
	March	3,629	2,232	1,398	801	174	627	2,829
	April	4,744	3,154	1,590	809	88	721	3,935
	May	4,898	3,234	1,664	848	280	568	4,049
	June	5,218	3,502	1,716	774	144	630	4,443
	July	5,690	3,868	1,822	571	145	426	5,119
	August	6,036	4,174	1,863	663	172	491	5,373
	September*	R 6,088	R 4,221	R 1,867	684	177	507	5,403
	October**	5,482	3,785	1,697	NA	NA	NA	NA
	AVERAGE	4,994	3,345	1,649	NA	NA	NA	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>3</sup> Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.1.

\*\* Italics denote preliminary data. See Explanatory Note 8.

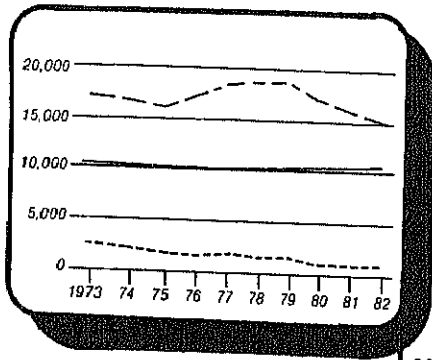
Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

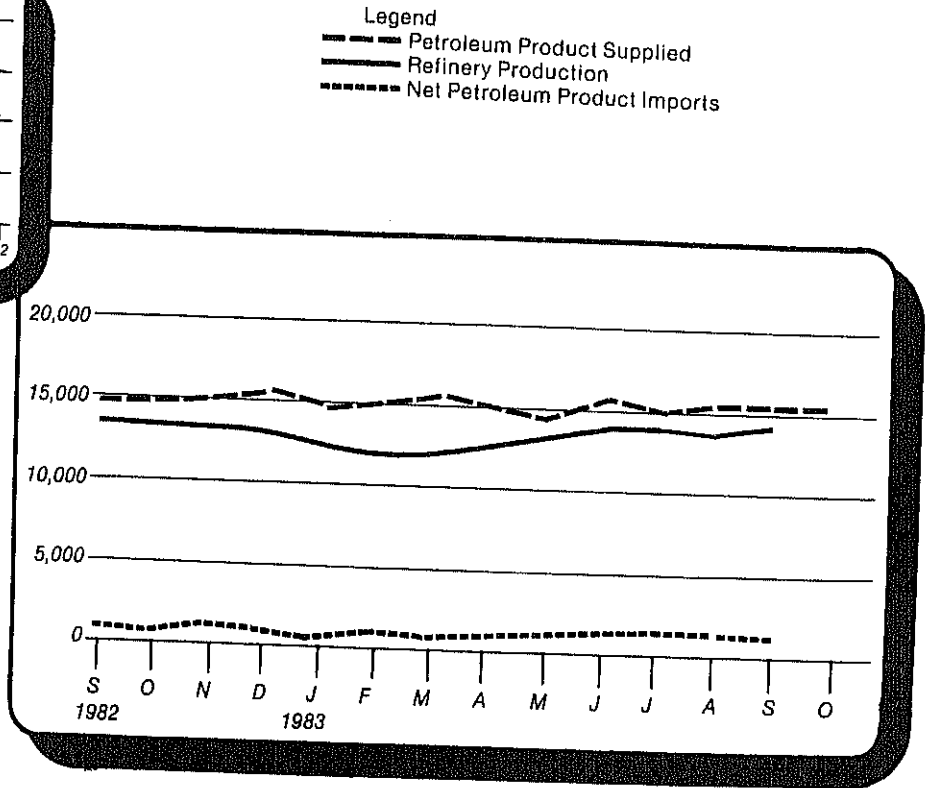


## Petroleum Overview

(Thousand Barrels Per Day)

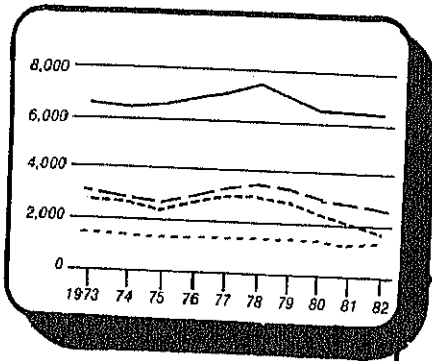


Annual

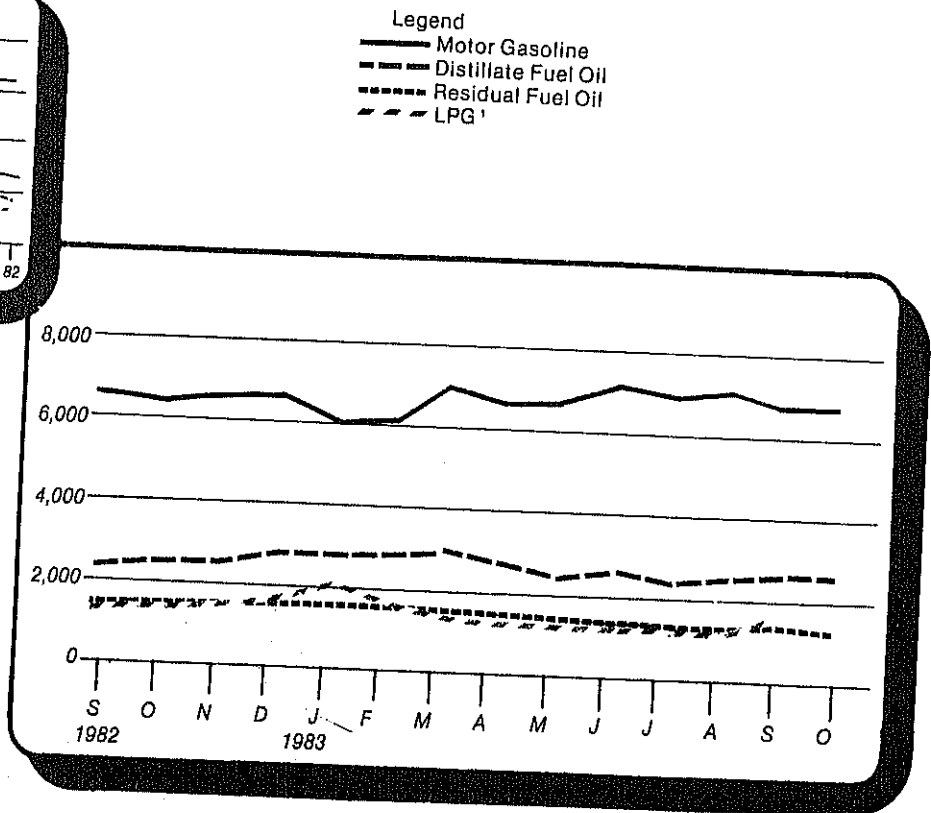


## Petroleum Products Supplied

(Thousand Barrels Per Day)



Annual

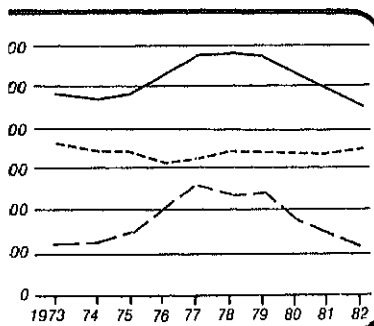


<sup>1</sup> Liquefied Petroleum Gases

Monthly

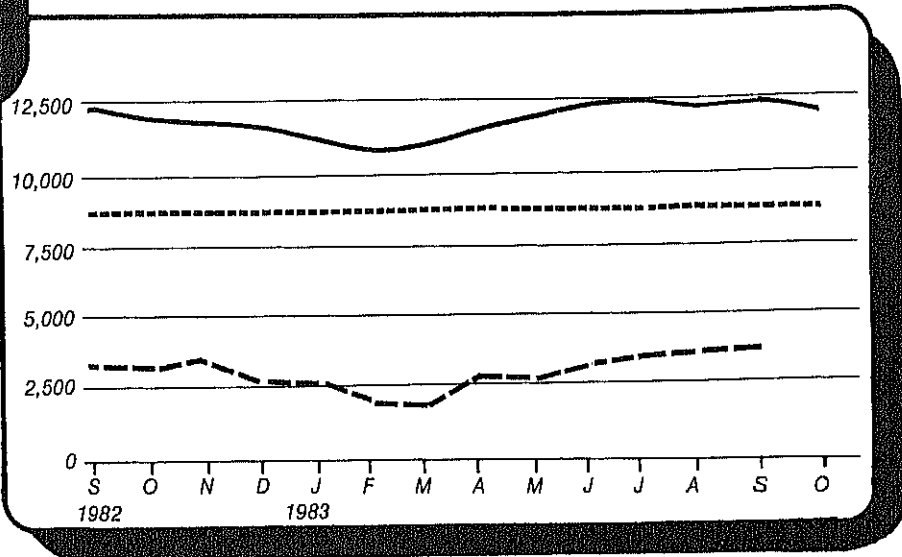
## Crude Oil Supply and Disposition

(Thousands of Barrels Per Day)



Annual

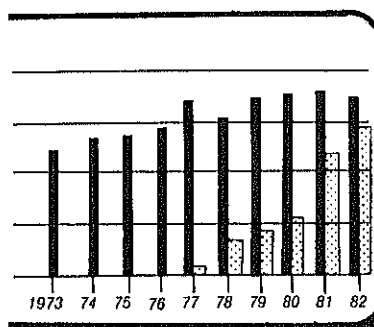
Includes SPR Imports



Monthly

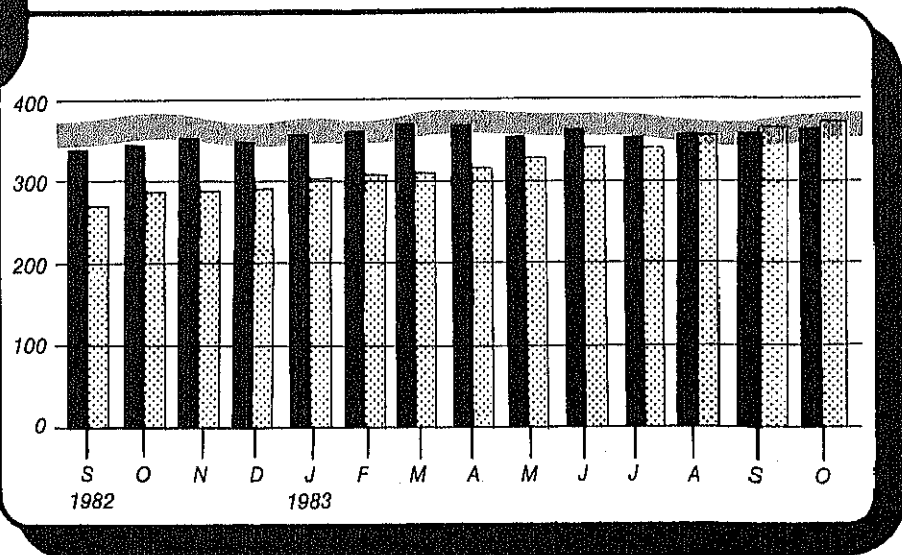
## Crude Oil Ending Stocks

(Millions of Barrels)



Annual

Level and width of Average Stock Range for crude oil is based on 3 years of data, July 80-July 83. See Appendix Note 6.



Monthly

5

# Crude Oil<sup>1</sup> Supply and Disposition

		Supply						
		Field Production		Imports			Stock Withdrawal <sup>2</sup>	
		Total Domestic	Alaskan	Total	SPR <sup>3</sup>	Other	SPR <sup>3</sup>	Other
		Thousand Barrels per Day						
								Unac- counted for Crude Oil
1973	AVERAGE	9,208	198	3,244		3,244		
1974	AVERAGE	8,774	193	3,477		3,477		3
1975	AVERAGE	8,375	191	4,105		4,105	-62	-25
1976	AVERAGE	8,132	173	5,287		5,287	-17	17
1977	AVERAGE	8,245	464	6,615	21	6,594	-39	77
1978	AVERAGE	8,707	1,229	6,356	162	6,195	-150	-6
1979	AVERAGE	8,552	1,401	6,519	67	6,452	-163	-57
1980	AVERAGE	8,597	1,617	5,263	44	5,219	-67	-11
							-45	-52
1981	January	8,540	1,606	4,932	106	4,826	-151	201
	February	8,604	1,619	4,873	80	4,793	-127	-150
	March	8,613	1,618	4,521	140	4,382	-155	-477
	April	8,557	1,608	4,338	272	4,066	-444	-151
	May	8,501	1,580	4,287	386	3,901	-513	122
	June	8,629	1,632	4,061	318	3,743	-434	299
	July	8,500	1,605	4,296	175	4,121	-324	-36
	August	8,583	1,602	4,179	257	3,922	-372	769
	September	8,604	1,607	4,740	435	4,305	-486	201
	October	8,563	1,596	4,380	453	3,927	-501	-259
	November	8,586	1,614	4,046	271	3,774	-259	-66
	December	8,585	1,623	4,137	165	3,971	-252	82
	AVERAGE	8,572	1,609	4,396	256	4,141	-336	46
1982	January	8,509	1,705	3,693	170	3,523	-159	-242
	February	8,702	1,707	2,990	159	2,830	-213	-29
	March	8,667	1,696	2,874	185	2,689	-235	357
	April	8,591	1,691	2,849	190	2,659	-233	196
	May	8,683	1,707	3,309	204	3,105	-176	205
	June	8,646	1,665	3,836	105	3,732	-105	144
	July	8,658	1,710	4,248	97	4,150	-97	-50
	August	8,634	1,697	3,851	208	3,643	-208	-232
	September	8,701	1,705	3,636	139	3,497	-143	406
	October	8,701	1,706	3,670	216	3,454	-216	-332
	November	8,697	1,676	3,862	180	3,683	-179	-219
	December	8,598	1,682	3,000	124	2,877	-125	252
	AVERAGE	8,649	1,696	3,488	165	3,323	-174	38
1983	January	8,634	1,698	2,938	219	2,720	-219	-348
	February	8,660	1,725	2,268	197	2,071	-197	-185
	March	8,677	1,726	2,232	201	2,031	-184	240
	April	8,686	1,710	3,154	205	2,949	-197	-241
	May	8,682	1,710	3,234	289	2,945	-293	362
	June	8,676	1,710	3,502	190	3,312	-188	25
	July	8,647	1,705	3,868	274	3,594	-264	382
	August	8,653	1,712	4,174	350	3,823	-358	-423
	September*	8,666	1,722	R 4,221	R 309	R 3,912	R -307	R 116
	October**	8,654	1,731	3,785	213	3,572	-220	-50
	AVERAGE	8,663	1,715	3,345	245	3,100	-243	-10

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.2.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Note: Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil<sup>1</sup> Supply and Disposition ( continued )

		Supply	Disposition				Ending Stocks <sup>2</sup>		
		Crude Used Directly <sup>3</sup>	Crude Losses	Refinery Inputs	Exports	Product Supplied <sup>3</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day					Million Barrels		
1973	AVERAGE	-19	13	12,431	2	NA	242		242
1974	AVERAGE	-15	13	12,133	3	NA	<sup>5</sup> 285		<sup>5</sup> 265
1975	AVERAGE	-17	13	12,442	6	NA	271		271
1976	AVERAGE	-18	15	13,416	8	NA	285		285
1977	AVERAGE	-14	16	14,602	50	NA	348	7	340
1978	AVERAGE	-14	16	14,739	158	NA	376	67	309
1979	AVERAGE	-13	16	14,648	235	NA	430	91	339
1980	AVERAGE	-13	15	13,481	287	NA	<sup>5</sup> 466	108	<sup>5</sup> 358
1981	January	-43	6	13,247	339	NA	486	112	374
	February	-55	3	12,902	198	NA	494	116	378
	March	-57	6	12,383	210	NA	514	121	393
	April	-59	3	12,091	198	NA	532	134	397
	May	-59	3	12,309	312	NA	544	150	394
	June	-58	7	12,415	123	NA	548	163	385
	July	-58	7	12,261	257	NA	559	173	386
	August	-58	5	12,908	204	NA	547	185	362
	September	-61	4	12,505	194	NA	555	199	356
	October	-63	3	12,057	226	NA	579	215	364
	November	-64	4	12,240	278	NA	589	223	366
	December	-63	4	12,349	189	NA	594	230	363
	AVERAGE	-58	5	12,470	228	NA			
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	<sup>5</sup> 644	294	<sup>5</sup> 350
	AVERAGE	-59	3	11,774	236	NA			
1983	January	NA	2	11,070	117	54	661	301	361
	February	NA	3	10,635	262	69	672	306	366
	March	NA	2	10,854	174	70	670	312	359
	April	NA	2	11,436	88	68	684	318	366
	May	NA	1	11,789	280	63	681	327	355
	June	NA	1	12,287	144	64	686	332	354
	July	NA	2	12,347	145	65	683	341	342
	August	NA	1	12,141	172	64	707	352	355
	September*	NA	1	R 12,445	177	66	R 713	R 361	R 352
	October**	NA	NA	11,779	NA	NA	720	367	353
	AVERAGE	NA	NA	11,685	NA	NA			

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> Beginning in January 1983, crude oil used directly as fuel is presented as product supplied

for crude oil. Prior to January 1983 crude oil used directly was included with crude oil losses in this table and with product supplied for distillate and residual fuel oils.

<sup>4</sup> Strategic Petroleum Reserve.

<sup>5</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis) end of year stocks would be: 1974-265, 1980-483 (Total) and 375 (Other primary), and 1982-644 (Total) and 350 (Other Primary).

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.2.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Finished Motor Gasoline Supply and Disposition

		Supply			Disposition				Ending Stocks <sup>1</sup>	
		Total Produc- tion	Imports <sup>2</sup>	Stock With- drawal <sup>2 3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>4</sup>	Finished Motor Gasoline
						Total	Unleaded <sup>5</sup>	Unleaded		
Thousand Barrels per Day								Percent of Total	Million Barrels	
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209	
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	<sup>6</sup> 218	
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235	
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231	
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258	
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238	
1979	AVERAGE	6,852	181	2	( <sup>s</sup> )	7,034	2,798	39.8	237	
1980	AVERAGE	6,506	140	-66	1	6,579	3,067	46.6	<sup>6</sup> 261	
1981	January	6,715	138	-421	( <sup>s</sup> )	6,431	3,141	48.8	276	227
	February	6,308	111	-118	1	6,301	3,095	49.1	284	230
	March	6,213	171	-81	( <sup>s</sup> )	6,303	3,097	49.1	285	232
	April	6,114	186	303	( <sup>s</sup> )	6,602	3,284	49.7	272	223
	May	6,122	150	344	1	6,615	3,115	47.1	259	213
	June	6,220	186	622	1	7,028	3,419	48.6	242	194
	July	6,405	151	268	( <sup>s</sup> )	6,823	3,424	50.2	228	186
	August	6,611	124	-95	3	6,637	3,344	50.4	233	189
	September	6,564	169	-70	2	6,662	3,338	50.1	237	191
	October	6,426	147	7	3	6,578	3,257	49.5	236	190
	November	6,564	148	-338	1	6,373	3,198	50.2	248	201
	December	6,586	197	-91	11	6,681	3,444	51.5	253	203
	AVERAGE	6,405	157	28	2	6,588	3,264	49.5		
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261	213
	February	5,899	133	172	8	6,196	3,210	51.8	257	208
	March	5,994	183	334	44	6,466	3,358	51.9	247	198
	April	6,095	185	650	33	6,897	3,495	50.7	221	179
	May	6,319	182	177	23	6,655	3,415	51.3	214	173
	June	6,754	230	-134	14	6,835	3,565	52.2	219	177
	July	6,768	225	-178	24	6,790	3,577	52.7	226	183
	August	6,419	291	-81	16	6,614	3,526	53.3	227	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234	191
	October	6,262	185	-42	15	6,391	3,351	52.4	234	192
	November	6,273	211	101	11	6,574	3,451	52.5	230	189
	December	6,542	178	-165	7	6,549	3,485	53.2	<sup>6</sup> 235	<sup>6</sup> 194
	AVERAGE	6,338	197	25	20	6,539	3,409	52.1		
1983	January	6,020	148	-186	( <sup>s</sup> )	5,981	3,352	56.0	251	208
	February	5,848	142	32	( <sup>s</sup> )	6,022	3,257	54.1	251	207
	March	5,897	205	765	23	6,843	3,620	52.9	224	184
	April	6,202	273	27	1	6,501	3,505	53.9	221	183
	May	6,386	284	-128	1	6,540	3,547	54.2	225	187
	June	6,646	265	118	22	7,008	3,796	54.2	223	183
	July	6,704	297	-210	18	6,773	3,752	55.4	231	190
	August	6,539	260	159	13	6,946	3,836	55.2	226	185
	September*	R 6,582	R 285	R -160	14	R 6,693	3,671	54.8	R 230	R 190
	October**	6,245	287	203	NA	6,719	NA	NA	222	185
	AVERAGE	6,310	245	63	NA	6,607	NA	NA		

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> Beginning in 1981, excludes blending components.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Includes motor gasoline blending components.

<sup>5</sup> Includes gasoline.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-225, 1980-263, 1982-244 (Total) and 203 (Finished). Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(<sup>6</sup>) = Less than 500 barrels per day. NA = Not available. R = Revised data.

\* See Explanatory Note 9.3.

\*\* Italics denote preliminary data. See Explanatory Note 8.

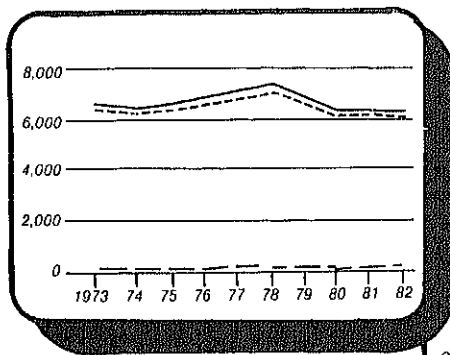
Note: Beginning in January 1981, survey forms were modified.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

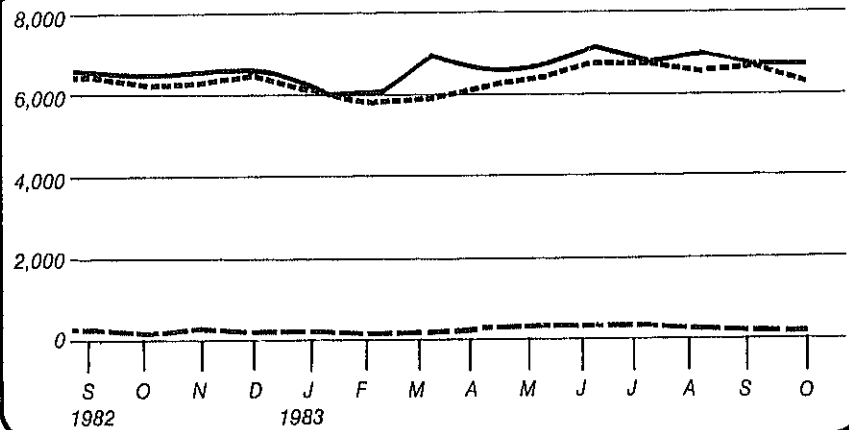
## Motor Gasoline Supply and Disposition

(Thousand Barrels Per Day)



Annual

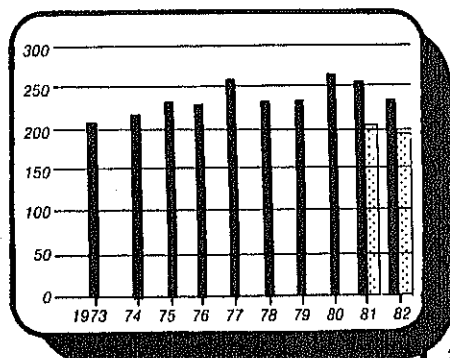
Legend  
 — Product Supplied  
 - - - Finished Gasoline Production  
 . . . Finished Gasoline Imports



Monthly

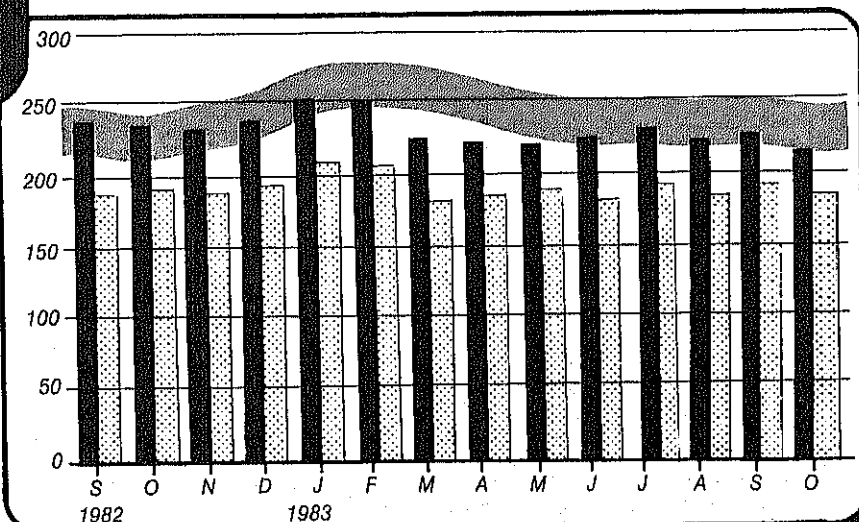
## Motor Gasoline Ending Stocks

(Millions of Barrels)



Annual

Legend  
 ■ Total Motor Gasoline<sup>1</sup>  
 □ Finished Motor Gasoline  
 ■ Average Stock Range<sup>2</sup>



Monthly

<sup>1</sup> Includes finished motor gasoline blending components

<sup>2</sup> Level and width of Average Stock Range for total motor gasoline based on 3 years of data, July 80-June 83. See Explanatory Note 6.

# Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>3</sup>	
Thousand Barrels per Day								Million Barrels
1973	AVERAGE	2,822	392	-115	2	9	3,092	196
1974	AVERAGE	2,669	289	-9	2	2	2,948	200
1975	AVERAGE	2,654	155	40	2	1	2,851	209
1976	AVERAGE	2,924	146	62	1	1	3,133	186
1977	AVERAGE	3,278	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	AVERAGE	2,662	142	64	1	3	2,866	205
1981	January	2,989	273	836	11	(s)	4,109	179
	February	2,809	325	246	11	17	3,373	173
	March	2,484	147	264	9	(s)	2,904	164
	April	2,418	116	-9	10	3	2,532	165
	May	2,454	179	-232	10	(s)	2,411	172
	June	2,501	225	-270	9	(s)	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	(s)	2,388	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	9	5	2,803	201
	November	2,716	124	36	11	6	2,880	200
	December	2,856	95	277	11	26	3,212	192
	AVERAGE	2,613	173	38	10	5	2,829	
1982	January	2,591	97	876	10	90	3,484	164
	February	2,427	132	605	11	90	3,085	147
	March	2,288	48	682	10	84	2,945	126
	April	2,358	59	612	13	64	2,978	108
	May	2,618	74	-183	10	75	2,444	114
	June	2,729	102	-335	10	55	2,452	124
	July	2,734	125	-789	11	24	2,058	148
	August	2,507	80	-339	10	40	2,218	159
	September	2,657	61	-85	12	139	2,507	161
	October	2,838	91	-289	8	66	2,581	170
	November	2,860	145	-514	8	24	2,475	186
	December	2,655	109	225	10	143	2,855	179
	AVERAGE	2,606	93	35	10	74	2,671	
1983	January	2,314	58	561	NA	173	2,760	168
	February	2,136	58	742	NA	105	2,832	147
	March	1,991	42	926	NA	59	2,900	119
	April	2,169	73	518	NA	47	2,713	103
	May	2,444	141	-193	NA	50	2,341	109
	June	2,545	175	-154	NA	40	2,526	114
	July	2,600	259	-556	NA	55	2,248	131
	August	2,612	302	-403	NA	43	2,467	144
	September*	R 2,725	R 253	R -374	NA	37	R 2,568	R 155
	October**	2,651	220	-244	NA	NA	2,576	162
	AVERAGE	2,421	159	77	NA	NA	2,591	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-224, 1980-205, and 1982-186. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(s) = Less than 500 barrels per day. NA = Not available. R = Revised data.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

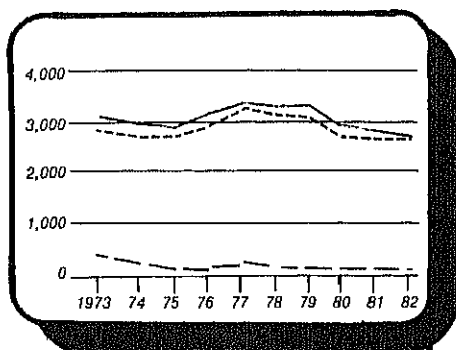
Note: Beginning in January 1981, survey forms were modified.

Geographic Coverage: The 50 United States and the District of Columbia.

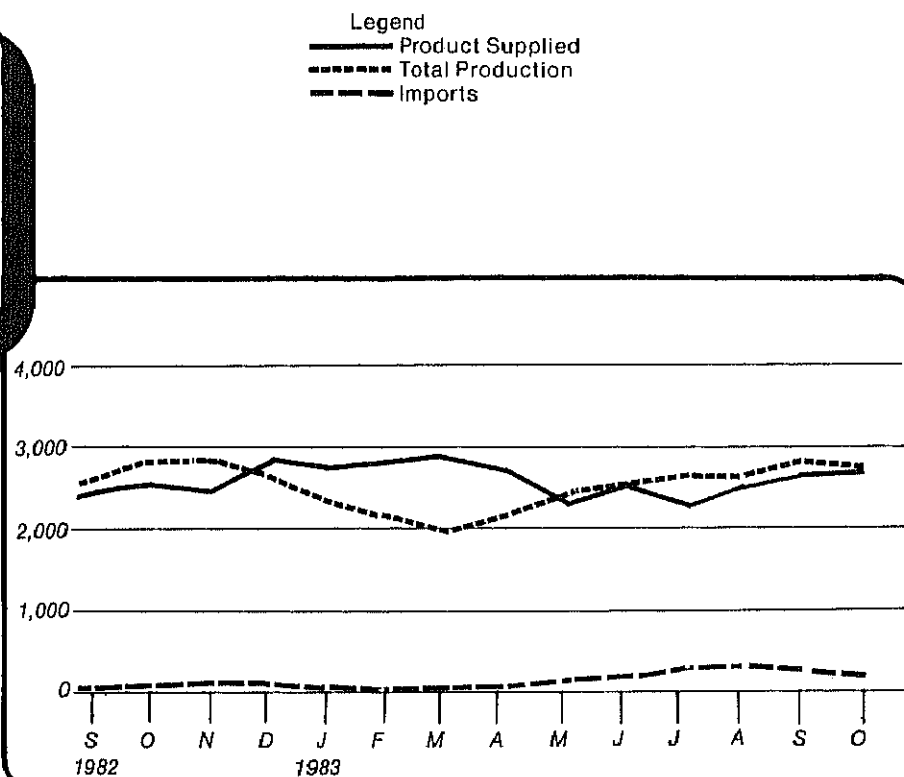
Sources: See "Sources" at the end of this section.

## Distillate Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



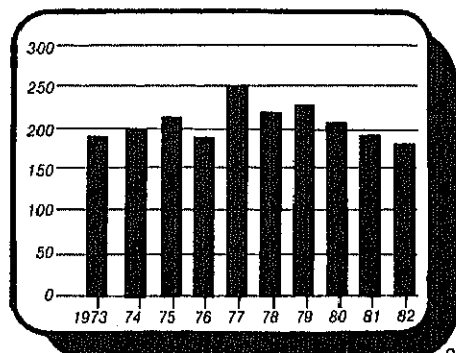
Annual



Monthly

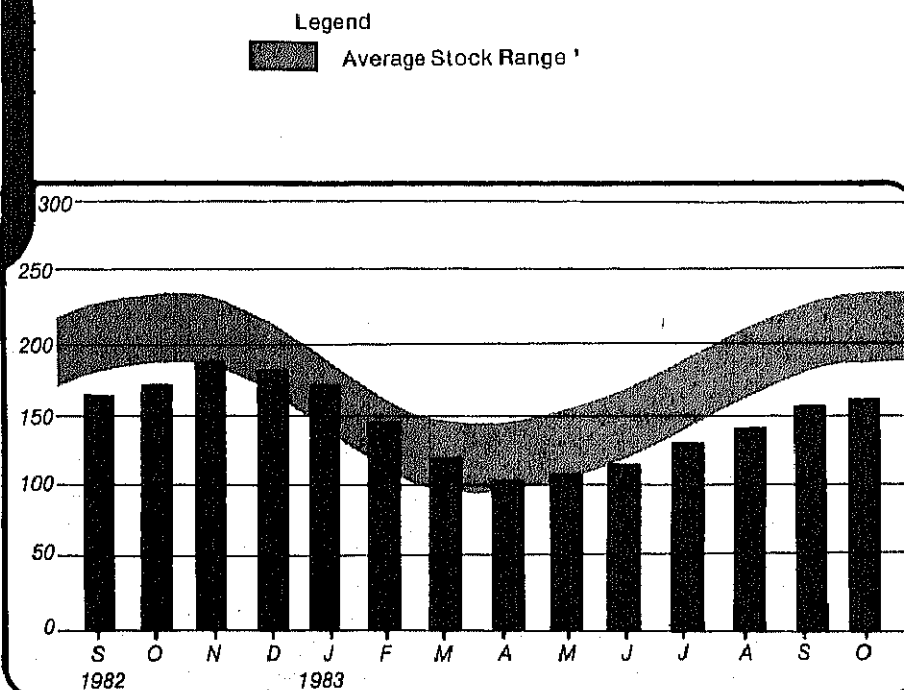
## Distillate Fuel Oil Ending Stocks

(Millions of Barrels)



Annual

<sup>1</sup> Level and width of Average Stock Range for distillate fuel oil is based on 3 years of data, July 80-July 83. See Explanatory Note 6.



Monthly



# Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>3</sup>	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,639	<sup>4</sup> 60
1975	AVERAGE	1,235	1,223	2	15	15	2,462	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980	AVERAGE	1,580	939	10	12	33	2,508	<sup>4</sup> 92
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,868	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	830	2	48	82	1,971	69
	August	1,231	819	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,238	786	8	54	202	1,884	80
	November	1,227	880	-49	53	203	1,909	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	1,321	800	37	48	118	2,088	
1982	January	1,235	831	301	53	235	2,185	69
	February	1,186	956	363	53	213	2,344	58
	March	1,123	912	12	53	197	1,903	58
	April	1,166	788	150	52	234	1,923	54
	May	1,128	742	-172	52	191	1,560	59
	June	1,074	652	-57	50	217	1,501	61
	July	1,028	657	56	49	239	1,550	59
	August	965	551	203	47	235	1,531	53
	September	1,008	872	-306	44	148	1,470	62
	October	955	783	-57	43	234	1,490	64
	November	989	837	-94	43	182	1,591	66
	December	989	747	6	43	186	1,598	<sup>4</sup> 66
	AVERAGE	1,070	776	32	48	209	1,716	
1983	January	935	691	243	NA	294	1,574	61
	February	857	632	270	NA	191	1,568	53
	March	833	686	220	NA	169	1,569	46
	April	942	743	-10	NA	310	1,364	47
	May	930	709	-139	NA	190	1,310	51
	June	832	676	28	NA	219	1,317	50
	July	771	682	-58	NA	90	1,306	52
	August	706	705	115	NA	165	1,362	48
	September*	R 815	R 690	R -47	NA	134	R 1,324	R 50
	October**	785	652	-8	NA	NA	1,312	47
	AVERAGE	840	687	60	NA	NA	1,400	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-75, 1980-91, and 1982-88. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

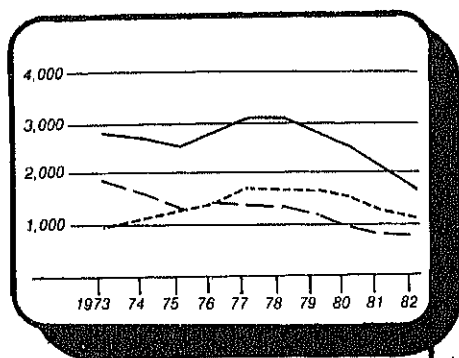
Note: Beginning in January 1981, survey forms were modified.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

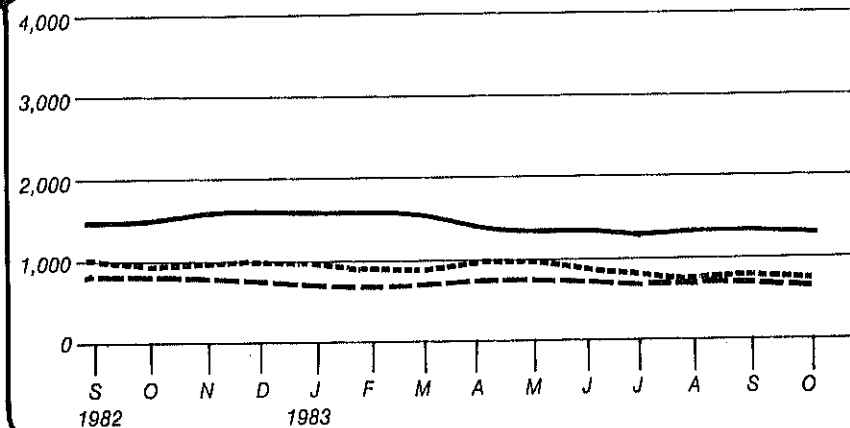
## Residual Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



Annual

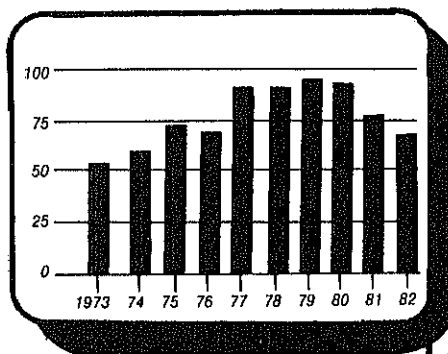
Legend  
 — Product Supplied  
 - - - Total Production  
 - . - Imports



Monthly

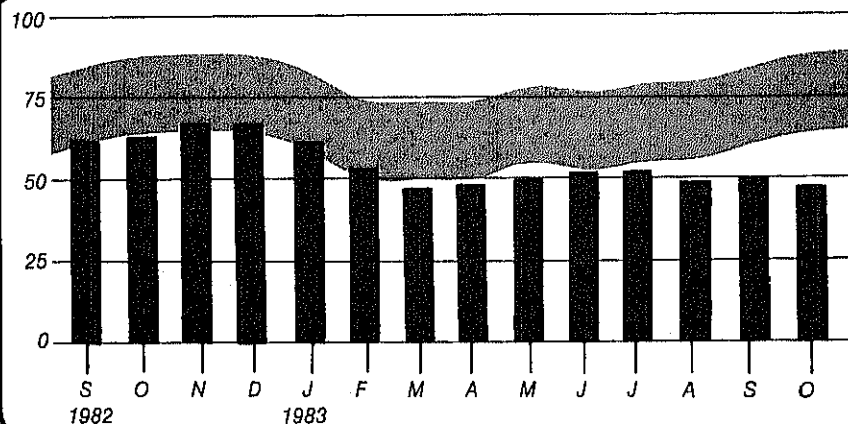
## Residual Fuel Oil Ending Stocks

(Millions of Barrels)



<sup>1</sup> Level and width of Average Stock Range for residual fuel oil based on 3 years of data, July 80-June 83. See Explanatory Note 6.

Legend  
 [Shaded Area] Average Stock Range <sup>1</sup>



Monthly

13

# Liquefied Petroleum Gases Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Refinery Inputs	Exports	Product Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	1,600	132	-35	220	27	1,449	99
1974	AVERAGE	1,565	123	-38	220	25	1,406	<sup>3</sup> 113
1975	AVERAGE	1,527	112	-35	246	26	1,333	125
1976	AVERAGE	1,535	130	24	260	25	1,404	116
1977	AVERAGE	1,566	161	-55	233	18	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	15	1,592	111
1980	AVERAGE	1,535	216	-27	233	21	1,469	<sup>3</sup> 120
1981	January	1,617	306	363	352	21	1,913	117
	February	1,593	327	173	303	21	1,769	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,586	214	-236	231	26	1,308	119
	May	1,587	189	-258	220	19	1,279	127
	June	1,567	206	-208	237	24	1,304	133
	July	1,507	213	-258	215	17	1,229	141
	August	1,592	195	-242	235	149	1,160	149
	September	1,622	199	-75	287	21	1,438	151
	October	1,593	287	72	320	76	1,556	149
	November	1,571	280	86	383	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	1,571	244	-18	289	42	1,466	
1982	January	1,565	314	443	391	67	1,863	121
	February	1,466	291	243	327	51	1,621	114
	March	1,544	223	211	289	74	1,615	108
	April	1,506	188	98	257	77	1,458	105
	May	1,565	186	-71	234	43	1,403	107
	June	1,515	192	-86	262	106	1,254	109
	July	1,476	227	-13	253	37	1,399	110
	August	1,511	125	-45	254	61	1,276	111
	September	1,538	247	37	274	85	1,463	110
	October	1,517	194	97	306	81	1,421	107
	November	1,542	267	175	363	37	1,583	102
	December	1,580	258	256	395	56	1,642	<sup>3</sup> 94
	AVERAGE	1,528	226	111	300	65	1,499	
1983	January	1,662	240	618	313	118	2,088	84
	February	1,560	305	84	237	76	1,636	81
	March	1,517	166	-51	189	127	1,316	83
	April	1,531	124	-107	198	116	1,232	86
	May	1,545	167	-326	207	84	1,094	96
	June	1,593	172	-333	205	59	1,169	106
	July	1,571	191	-206	217	55	1,284	112
	August	1,505	160	-183	229	29	1,225	118
	September*	1,625	178	-23	236	86	1,457	119
	AVERAGE	1,568	188	-59	226	83	1,387	

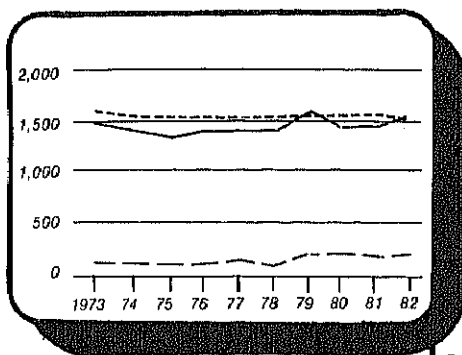
<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Members of new respondents were added to bulk investigation during the previous years. withdrawals. Using the expanded 4-113, 1980-128, and 1982-103. Stock using new basis stock levels. nt rounding.

of Columbia.

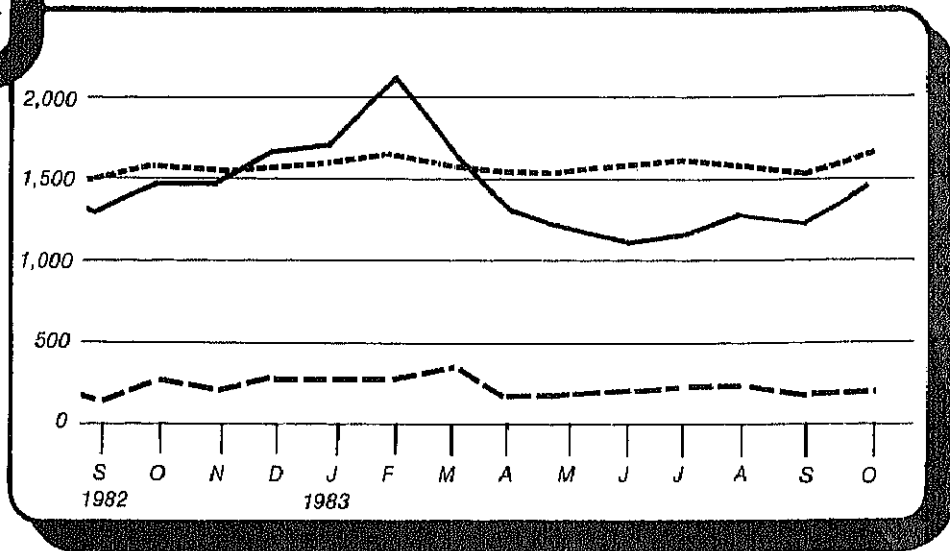
## Liquefied Petroleum Gases Supply and Disposition

(Thousand Barrels Per Day)



Annual

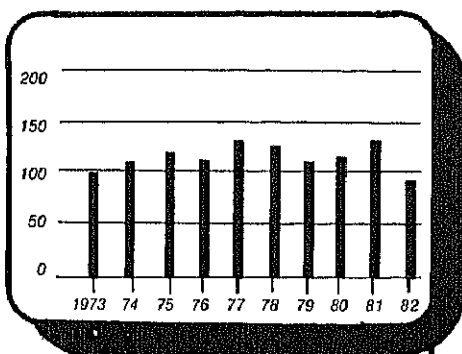
Legend  
 — Product Supplied  
 - - - Total Production  
 . . . Imports



Monthly

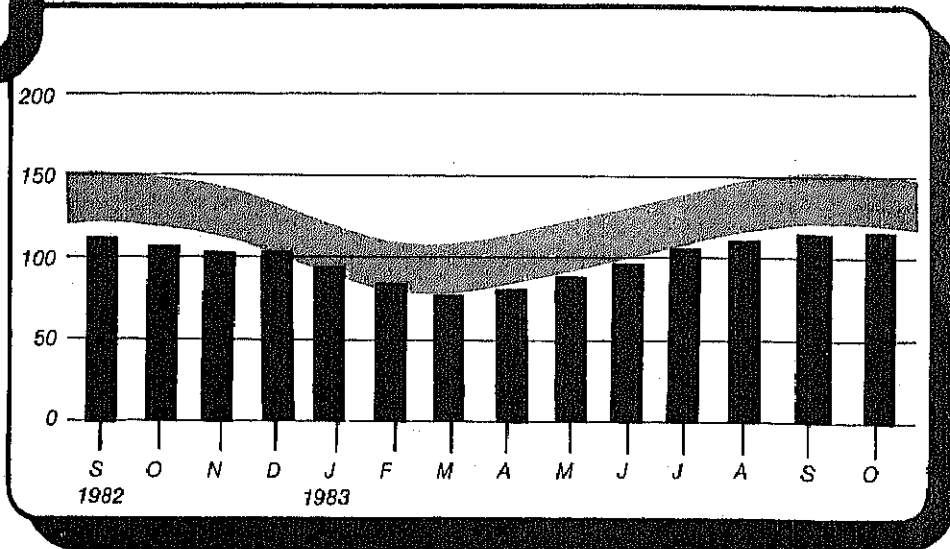
## Liquefied Petroleum Gases Ending Stocks

(Millions of Barrels)



Annual

Legend  
 [Shaded Area] Average Stock Range<sup>1</sup>



Monthly

<sup>1</sup> Level and width of Average Stock range for liquefied petroleum gases based on 3 years of data, July 80-June 83. See Explanatory Note 6.

# Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	<sup>4</sup> 218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	AVERAGE	3,956	210	-23	311	198	3,634	<sup>4</sup> 247
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	538	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	285	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,739	226	46	723	199	3,088	
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	<sup>4</sup> 253
	AVERAGE	3,453	334	80	787	211	2,869	
1983	January	3,222	297	-371	570	271	2,307	271
	February	3,270	287	-1	680	232	2,645	271
	March	3,400	298	-94	570	249	2,786	273
	April	3,363	377	3	596	247	2,901	273
	May	3,448	364	26	694	242	2,902	273
	June	3,674	427	99	715	292	3,197	270
	July	3,703	393	106	757	209	3,237	266
	August	3,774	435	23	689	242	3,302	266
	September*	3,861	460	-31	768	236	3,287	267
	AVERAGE	3,526	371	-27	671	246	2,978	

<sup>1</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-220, 1980-249, and 1982-259. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.6.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil and Petroleum Product Imports from OPEC Sources<sup>1</sup>

		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
		Thousand Barrels per Day										
1973	AVERAGE	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	AVERAGE	190	4	461	74	300	469	713	979	88	3,280	752
1975	AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,363
1976	AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	AVERAGE	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	AVERAGE	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	AVERAGE	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
	February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
	March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
	April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
	May	393	443	933	17	297	0	664	331	124	3,203	1,796
	June	356	380	865	60	367	0	528	248	118	2,922	1,703
	July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
	August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
	September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
	October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
	November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
	December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
	AVERAGE	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,096	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	106	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	AVERAGE	170	26	552	92	248	35	514	412	97	2,146	854
1983	January	204	0	282	47	255	43	186	324	43	1,384	533
	February	104	0	214	9	217	0	92	371	28	1,035	326
	March	63	0	103	0	138	0	121	425	173	1,023	183
	April	228	0	180	( <sup>8</sup> )	210	0	186	508	125	1,438	409
	May	284	0	122	12	324	37	352	444	69	1,645	419
	June	300	0	175	40	502	38	402	335	146	1,938	515
	July	282	0	182	58	464	112	525	431	187	2,240	599
	August	370	0	426	45	416	213	464	477	230	2,641	866
	September	413	0	587	21	516	86	324	472	208	2,627	1,074
	AVERAGE	251	0	252	26	339	60	297	421	135	1,780	548

<sup>1</sup> Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

(<sup>8</sup>) Less than 500 barrels.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil and Petroleum Product Imports from Non-OPEC Sources<sup>1</sup>

		Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico <sup>2</sup>	Virgin Islands <sup>2</sup>	Other	Total
		Thousand Barrels per Day									
1973	AVERAGE	174	1,325	16	585	255	15	99	329	465	3,263
1974	AVERAGE	164	1,070	8	511	251	8	90	391	340	2,832
1975	AVERAGE	152	846	71	332	242	14	90	406	300	2,454
1976	AVERAGE	118	599	87	275	274	31	88	422	353	2,247
1977	AVERAGE	171	517	179	211	289	126	105	466	550	2,614
1978	AVERAGE	160	467	318	229	253	180	94	429	484	2,613
1979	AVERAGE	147	538	439	231	190	202	92	431	548	2,819
1980	AVERAGE	78	455	533	225	176	176	88	388	491	2,609
1981	January	39	543	401	198	150	233	89	494	552	2,701
	February	84	546	437	227	163	271	46	481	626	2,881
	March	74	472	488	227	93	263	45	370	571	2,603
	April	68	412	418	198	139	402	40	365	380	2,423
	May	122	365	522	213	105	368	58	344	474	2,573
	June	51	353	538	196	124	397	67	262	525	2,513
	July	77	382	384	212	178	553	50	206	541	2,583
	August	69	378	489	255	123	592	68	184	539	2,698
	September	111	423	708	163	169	528	72	265	661	3,100
	October	63	449	669	161	121	351	60	303	562	2,739
	November	63	547	628	168	108	253	76	294	421	2,557
	December	70	501	587	148	125	280	73	367	563	2,714
	AVERAGE	74	447	522	197	133	375	62	327	534	2,672
1982	January	58	513	425	179	106	346	62	334	452	2,474
	February	67	537	476	221	120	181	38	362	508	2,510
	March	43	437	503	189	118	294	62	307	480	2,433
	April	82	360	476	184	166	247	36	266	690	2,507
	May	77	419	766	152	95	516	47	302	607	2,981
	June	32	481	797	148	129	557	58	322	708	3,231
	July	64	536	783	158	118	433	38	376	698	3,204
	August	80	443	853	145	106	520	24	317	650	3,137
	September	92	493	897	195	89	631	51	278	746	3,472
	October	45	459	682	148	109	666	52	262	801	3,222
	November	51	553	860	212	90	623	81	334	706	3,508
	December	88	561	689	174	102	438	48	336	480	2,916
	AVERAGE	65	482	685	175	112	456	50	316	627	2,968
1983	January	68	536	849	218	73	315	40	299	588	2,988
	February	92	592	722	179	81	193	50	192	554	2,655
	March	86	488	760	187	78	240	43	162	563	2,608
	April	167	452	981	216	85	421	20	183	781	3,306
	May	135	501	944	153	108	483	42	235	651	3,252
	June	137	576	831	181	120	424	48	252	712	3,281
	July	69	633	849	191	103	369	37	364	836	3,450
	August	142	540	891	194	90	461	40	313	725	3,395
	September	137	523	832	251	82	472	33	308	822	3,461
	AVERAGE	115	537	852	197	91	377	39	257	693	3,158

<sup>1</sup> Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> U.S. Possessions.

Totals may not equal sum of components due to independent rounding.

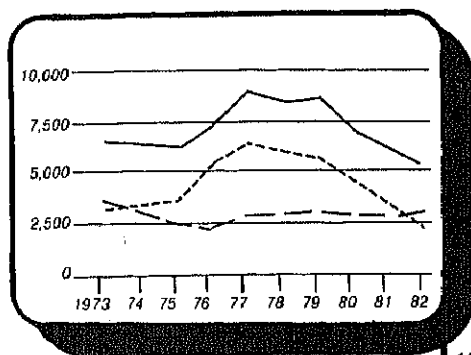
Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

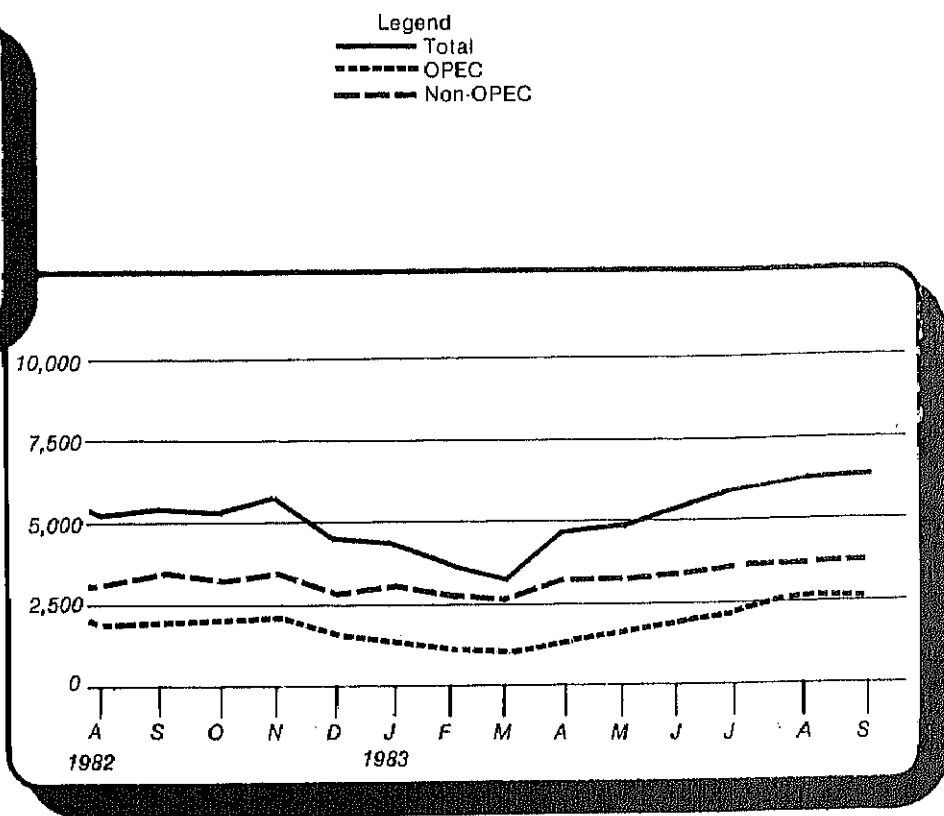
Sources: See "Sources" at the end of this section.

# Crude Oil (including SPR) and Petroleum Products Imports

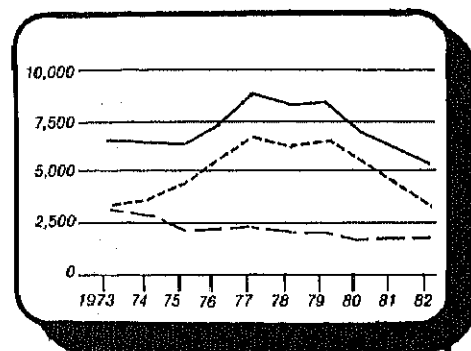
(Thousand Barrels Per Day)



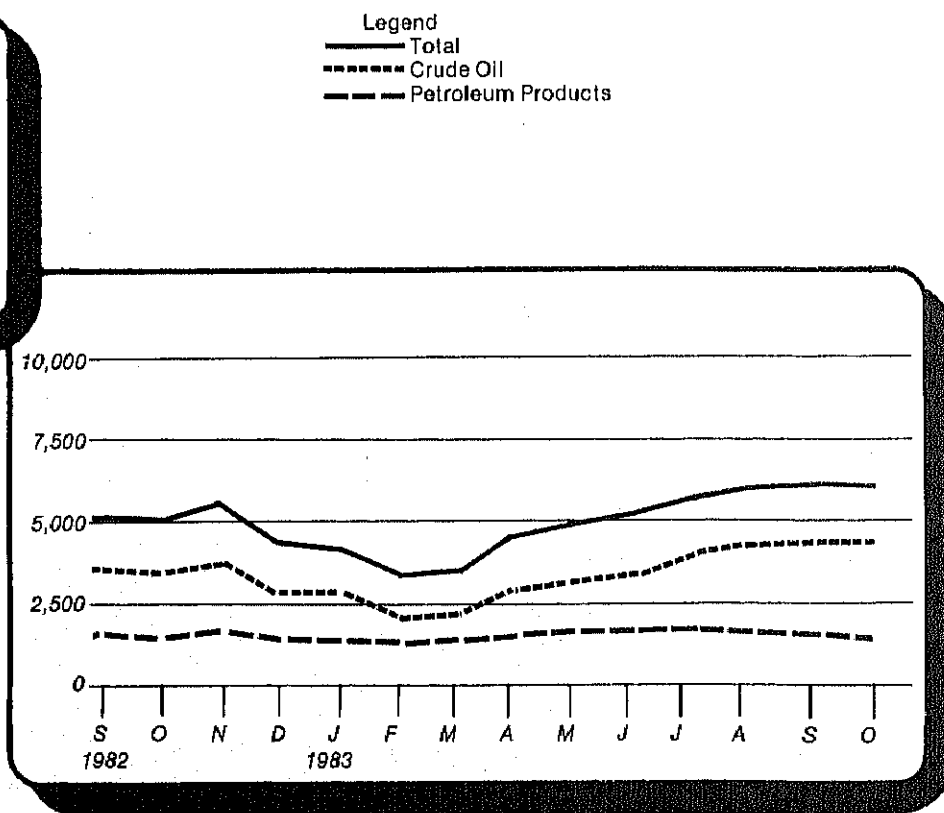
Annual



Monthly



Annual



Monthly



# Sources

1. 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, *Petroleum Statement, Annual and PAD Districts Supply/Demand, Annual*, Mineral Industry Surveys.
2. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Monthly Petroleum Statistics Report*, (unleaded gasoline category).
3. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Petroleum Statement, Annual and PAD Districts Supply/Demand, Annual*, Energy Data Reports.
4. January 1981 through December 1982: Energy Information Administration, U.S. Department of Energy, *Petroleum Supply Annual*.
5. January 1983 through September 1983: Detailed statistics in appropriate Issues of the *Petroleum Supply Monthly*. (See Explanatory Notes 9.1 through 9.6).
6. October 1983: Estimates based on EIA weekly data (except domestic crude oil production) (see Explanatory Note 1.1).
7. January 1983 through October 1983: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies the U.S. Geological Survey. (See Explanatory Note 3).

## Detailed Statistics





Table 1. U.S. Petroleum Balance, September 1983

	Current Month		Year-to-date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
<b>Crude Oil (Including Lease Condensate)</b>				
Field Production				
(1) Alaska .....	E 51,663	1,722	E 467,678	1,713
(2) Lower 48 States .....	E 208,311	6,944	E 1,897,743	6,951
(3) Total U.S. ....	E 259,974	8,666	E 2,365,421	8,665
Net Imports				
(4) Imports (Gross Excluding SPR) .....	117,354	3,912	831,673	3,046
(5) SPR Imports .....	9,266	309	67,933	249
(6) Exports .....	5,315	177	47,108	173
(7) Imports (Net Including SPR) .....	121,304	4,043	852,499	3,123
Other Sources				
(8) SPR Withdrawal (+) or Addition (-) .....	-9,220	-307	-67,173	-246
(9) Other Stock Withdrawal (+) or Addition (-) .....	3,477	118	-1,589	-6
(10) Product Supplied and Losses .....	-2,007	-67	-18,088	-68
(11) Unaccounted for 1 .....	-188	-6	55,955	205
(12) Total Other Sources .....	-7,938	-265	-30,895	-113
(13) Crude Input to Refineries .....	373,340	12,445	3,187,025	11,674
(13) = (3) + (7) + (12)				
<b>Natural Gas Plant Liquids (NGPL)</b>				
(14) Field Production .....	47,930	1,598	424,370	1,554
(15) Imports 2 .....	575	19	3,689	14
(16) Stock Withdrawal (+) or Addition (-) 2 .....	526	18	-5,305	-19
(17) Total NGPL Supply .....	49,031	1,634	422,754	1,549
Other Liquids				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-) .....	-591	-20	-5,529	-20
(19) Imports .....	9,876	329	70,512	258
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) .....	1,797	60	14,525	53
(21) Refinery Processing Gain 1 .....	15,041	501	129,257	473
(22) Crude Oil Product Supplied .....	1,991	66	17,672	65
(23) Total Other Liquids .....	28,114	937	226,437	829
(23) = (18) through (22)				
(24) Total Production of Products 3 .....	450,486	15,016	3,836,216	14,052
(24) = (13) + (17) + (23)				
Net Imports of Refined Products 3				
(25) Imports (Gross) .....	45,560	1,519	374,402	1,371
(26) Exports .....	15,216	507	164,711	603
(27) Imports (Net) .....	30,345	1,011	209,691	768
(28) Total New Supply of Products .....	480,830	16,028	4,045,907	14,820
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) 3 .....	-18,964	-632	49,464	181
(30) Total Petroleum Products Supplied for Domestic Use .....	461,866	15,396	4,095,371	15,001
(30) = (28) + (29)				
(31) Finished Motor Gasoline .....	200,805	6,693	1,800,291	6,594
(32) Distillate Fuel Oil .....	77,039	2,588	707,708	2,592
(33) Residual Fuel Oil .....	39,716	1,324	384,818	1,410
(34) Liquefied Petroleum Gases .....	43,719	1,457	378,783	1,387
(35) Other 4 .....	98,598	3,287	806,099	2,953
(36) Crude Oil .....	1,991	66	17,672	65
(37) Total Product Supplied .....	461,866	15,396	4,095,371	15,001
(37) = (31) through (36)				
Ending Stocks, All Oils				
(38) Crude Oil and Lease Condensate (Excluding SPR) .....	351,633	--	351,633	--
(39) Strategic Petroleum Reserve (SPR) .....	361,000	--	361,000	--
(40) Unfinished Oils .....	112,645	--	112,645	--
(41) Gasoline Blending Components .....	40,706	--	40,706	--
(42) Natural Gasoline and Unfractionated Stream 2 .....	16,773	--	16,773	--
(43) Finished Refined Products 3 .....	609,392	--	609,392	--
(44) Total Stocks .....	1,492,149	--	1,492,149	--

1 A balancing item.

2 Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.

3 For products included see Explanatory Note 9.7.

4 Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil and liquefied petroleum gases.

E = Estimated.

-- Not Applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2 and 9.7.

Table 2. Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels)

Commodity	Supply				Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate) -----										
E 259,974										
Natural Gas Liquids and LRGs -----										
Natural Gasoline and Isopentane .....	47,567	10,912	5,919	-158	0	0	13,802	2,589	47,849	135,624
Unfractionated Stream .....	9,428	0	437	-5	0	0	5,732	0	4,128	7,008
Plant Condensate .....	-482	0	0	482	0	0	0	0	0	9,315
Liquefied Petroleum Gases .....	792	0	138	49	0	0	977	0	2	450
Ethane .....	37,829	10,912	5,344	-684	0	0	7,093	2,589	43,719	118,851
Propane .....	8,024	573	1,431	-998	0	0	69	( <sup>g</sup> )	8,961	5,884
Butane .....	12,678	8,220	1,345	619	0	0	133	-1,260	21,468	62,284
Butane-Propane Mixtures .....	6,324	1,935	1,035	-488	0	0	3,775	1,329	3,703	26,041
Ethane-Propane Mixtures .....	12	185	374	-134	0	0	261	0	303	1,813
Isobutane .....	8,012	0	1,159	76	0	0	0	0	9,247	12,748
.....	2,652	-1	0	241	0	0	2,855	0	37	10,081
Other Liquids -----										
Other Hydrocarbons and Alcohol .....	1,797	0	9,876	-591	0	0	16,321	0	-5,239	153,351
Unfinished Oils .....	1,797	0	0	-90	0	0	1,707	0	0	397
Motor Gasoline Blending Components .....	0	0	8,636	-2,132	0	0	9,915	0	-3,411	112,645
Aviation Gasoline Blending Components .....	0	0	1,241	1,585	0	0	4,653	0	-1,827	39,984
.....	0	0	0	46	0	0	46	0	0	325
Finished Petroleum Products -----										
Finished Motor Gasoline .....	363	407,592	40,217	-18,280	0	0	0	12,627	417,265	490,541
Finished Leaded Motor Gasoline .....	48	197,404	8,564	-4,801	0	0	0	411	200,805	189,679
Finished Unleaded Motor Gasoline .....	32	85,151	5,101	797	0	0	0	411	90,671	94,610
Finished Aviation Gasoline .....	16	112,253	3,463	-5,598	0	0	0	0	110,134	95,069
Naphtha-Type Jet Fuel .....	159	807	1	18	0	0	0	0	985	2,543
Kerosene-Type Jet Fuel .....	0	5,933	0	-260	0	0	0	( <sup>g</sup> )	5,673	6,805
Kerosene .....	0	26,879	1,237	-1,336	0	0	0	270	26,510	34,985
Distillate Fuel Oil .....	3	3,513	301	-921	0	0	0	5	2,891	9,194
Residual Fuel Oil .....	1	81,744	7,599	-11,208	0	0	0	1,097	77,039	154,748
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	24,448	20,698	-1,398	0	0	0	4,032	39,716	49,691
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	4,775	42	-145	0	0	0	171	4,501	2,066
Special Naphthas .....	0	7,578	0	-92	0	0	0	591	6,895	2,157
Lubricants .....	97	1,718	776	-96	0	0	0	403	2,082	3,165
Waxes .....	0	4,672	248	496	0	0	0	555	4,862	10,954
Petroleum Coke .....	0	425	44	71	0	0	0	35	505	746
Asphalt and Road Oil .....	0	12,885	0	-375	0	0	0	4,998	7,512	4,830
Still Gas .....	0	15,144	391	2,129	0	0	0	3	17,660	17,118
Miscellaneous Products .....	0	17,736	0	0	0	0	0	0	17,736	0
.....	55	1,931	316	-362	0	0	0	56	1,884	1,860
Total .....	309,701	418,504	182,631	-24,772	-188	16	403,463	20,531	461,866	1,492,149

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(<sup>g</sup>) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition of Crude Oil and Petroleum Products, January - September 1983  
(Thousand Barrels)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 2,365,421	0	899,607	-68,762	55,955	416	3,187,025	47,108	17,672	712,633
Natural Gas Liquids and LRGs	421,006	88,302	55,077	-21,438	0	0	120,142	22,764	400,041	135,624
Natural Gasoline and Isopentane	70,228	0	1,840	-1,021	0	0	49,808	0	21,239	7,008
Unfractionated Stream	5,445	0	0	-5,276	0	0	169	0	0	9,315
Plant Condensate	5,689	0	1,849	992	0	0	8,512	0	18	450
Liquefied Petroleum Gases	339,644	88,302	51,387	-16,133	0	0	61,653	22,764	378,783	118,851
Ethane	68,914	4,116	12,878	87	0	0	720	30	85,244	5,884
Propane	119,238	72,972	11,694	-4,047	0	0	1,115	13,651	185,091	62,284
Butane	55,331	10,043	11,858	-9,359	0	0	34,762	9,083	24,028	26,041
Butane-Propane Mixtures	1,484	1,000	4,786	312	0	0	2,091	0	5,491	1,813
Ethane-Propane Mixtures	69,559	0	10,171	-1,466	0	0	48	0	78,216	12,748
Isobutane	25,118	171	0	-1,660	0	0	22,917	0	712	10,081
Other Liquids	14,525	0	70,512	-5,529	0	0	124,606	0	-45,098	153,351
Other Hydrocarbons and Alcohol	14,525	0	0	-86	0	0	14,439	0	0	397
Unfinished Oils	0	0	61,647	-7,368	0	0	78,006	0	-23,727	112,645
Motor Gasoline Blending Components	0	0	8,865	1,758	0	0	31,511	0	-20,888	39,964
Aviation Gasoline Blending Components	0	0	1	167	0	0	650	0	-482	325
Finished Petroleum Products	3,364	3,472,728	323,014	65,597	0	0	0	141,947	3,722,757	490,541
Finished Motor Gasoline	620	1,723,940	65,725	12,858	0	0	0	2,852	1,800,291	189,679
Finished Leaded Motor Gasoline	423	777,109	36,395	7,545	0	0	0	2,852	818,620	94,610
Finished Unleaded Motor Gasoline	197	946,831	29,330	5,313	0	0	0	0	981,671	95,069
Finished Aviation Gasoline	862	6,209	212	-229	0	0	0	0	7,054	2,543
Naphtha-Type Jet Fuel	0	57,272	0	384	0	0	0	201	57,455	6,805
Kero-Type Jet Fuel	1	222,362	7,021	-2,984	0	0	0	1,099	225,301	34,985
Kerosene	30	27,888	1,947	1,598	0	0	0	73	31,390	9,194
Distillate Fuel Oil	11	653,776	41,501	30,831	0	0	0	18,411	707,708	154,748
Residual Fuel Oil	0	231,054	188,622	18,538	0	0	0	53,397	384,818	49,691
Naphtha < 400 Deg. for Petro. Feed. Use	0	38,598	3,557	-99	0	0	0	1,206	40,851	2,066
Other Oils > 400 Deg. for Petro. Feed. Use	0	70,840	179	23	0	0	0	4,238	66,804	2,157
Special Naphthas	898	14,844	5,440	309	0	0	0	902	20,589	3,165
Lubricants	0	38,958	2,053	2,227	0	0	0	4,404	38,833	10,954
Waxes	0	4,046	232	40	0	0	0	197	4,121	746
Petroleum Coke	0	112,825	0	1,891	0	0	0	54,459	60,357	4,830
Asphalt and Road Oil	0	104,998	2,132	151	0	0	0	234	107,048	-17,118
Still Gas	0	149,592	0	0	0	0	0	0	149,592	0
Miscellaneous Products	942	15,426	4,393	59	0	0	0	274	20,545	1,860
Total	2,804,316	3,561,030	1,348,209	-30,132	55,955	416	3,431,773	211,818	4,095,371	1,492,149

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(S) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,666	0	4,221	-191	-6	1	12,445	177	66
Natural Gas Liquids and LRGs	1,586	364	197	-5	0	0	460	86	1,595
Natural Gasoline and Isopentane	314	0	15	(s)	0	0	191	0	138
Unfractionated Stream	-16	0	0	16	0	0	0	0	0
Plant Condensate	26	0	5	2	0	0	33	0	(s)
Liquefied Petroleum Gases	1,261	364	178	-23	0	0	236	86	1,457
Ethane	267	19	48	-33	0	0	2	(s)	299
Propane	423	274	45	21	0	0	4	42	716
Butane	211	65	35	-16	0	0	126	44	123
Butane-Propane Mixtures	5	6	12	-4	0	0	9	0	10
Ethane-Propane Mixtures	267	0	39	3	0	0	0	0	308
Isobutane	88	(s)	0	8	0	0	95	0	1
Other Liquids	60	0	329	-20	0	0	544	0	-175
Other Hydrocarbons and Alcohol	60	0	0	-3	0	0	57	0	0
Unfinished Oils	0	0	288	-71	0	0	331	0	-114
Motor Gasoline Blending Components	0	0	41	53	0	0	155	0	-61
Aviation Gasoline Blending Components	0	0	0	2	0	0	2	0	0
Finished Petroleum Products	12	13,586	1,341	-609	0	0	0	421	13,909
Finished Motor Gasoline	2	6,580	285	-160	0	0	0	14	6,693
Finished Leaded Motor Gasoline	1	2,838	170	27	0	0	0	14	3,022
Finished Unleaded Motor Gasoline	1	3,742	115	-187	0	0	0	0	3,671
Finished Aviation Gasoline	5	27	(s)	1	0	0	0	0	33
Naphtha-Type Jet Fuel	0	198	0	-9	0	0	0	(s)	189
Kerosene-Type Jet Fuel	0	896	41	-45	0	0	0	9	884
Kerosene	(s)	117	10	-31	0	0	0	(s)	96
Distillate Fuel Oil	(s)	2,725	253	-374	0	0	0	37	2,568
Residual Fuel Oil	0	815	690	-47	0	0	0	134	1,324
Naphtha < 400 Deg. for Petro. Feed. Use	0	159	1	-5	0	0	0	6	150
Other Oils > 400 Deg. for Petro. Feed. Use	0	253	0	-3	0	0	0	20	230
Special Naphthas	3	57	26	-3	0	0	0	13	70
Lubricants	0	156	8	17	0	0	0	18	162
Waxes	0	14	1	2	0	0	0	1	17
Petroleum Coke	0	430	0	-13	0	0	0	167	250
Asphalt and Road Oil	0	505	13	71	0	0	0	(s)	589
Still Gas	0	591	0	0	0	0	0	0	591
Miscellaneous Products	2	64	11	-12	0	0	0	2	63
Total	10,323	13,950	6,088	-826	-6	1	13,449	684	15,396

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - September 1983  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b> .....	8,665	0	3,295	-252	205	2	11,674	173	65
<b>Natural Gas Liquids and LRGs</b> .....	1,542	323	202	-79	0	0	440	83	1,465
Natural Gasoline and Isopentane .....	257	0	7	-4	0	0	182	0	78
Unfractionated Stream .....	20	0	0	-19	0	0	1	0	0
Plant Condensate .....	21	0	7	4	0	0	31	0	(s)
Liquefied Petroleum Gases .....	1,244	323	188	-59	0	0	226	83	1,387
Ethane .....	252	15	47	(s)	0	0	3	(s)	312
Propane .....	437	267	43	-15	0	0	4	50	678
Butane .....	203	37	43	-34	0	0	127	33	88
Butane-Propane Mixtures .....	5	4	18	1	0	0	8	0	20
Ethane-Propane Mixtures .....	255	0	37	-5	0	0	(s)	0	287
Isobutane .....	92	1	0	-6	0	0	84	0	3
<b>Other Liquids</b> .....	53	0	258	-20	0	0	456	0	-165
Other Hydrocarbons and Alcohol .....	53	0	0	(s)	0	0	53	0	0
Unfinished Oils .....	0	0	226	-27	0	0	286	0	-87
Motor Gasoline Blending Components .....	0	0	32	6	0	0	115	0	-77
Aviation Gasoline Blending Components .....	0	0	(s)	1	0	0	2	0	-2
<b>Finished Petroleum Products</b> .....	12	12,721	1,183	240	0	0	0	520	13,636
Finished Motor Gasoline .....	2	6,315	241	47	0	0	0	10	6,594
Finished Leaded Motor Gasoline .....	2	2,847	133	28	0	0	0	10	2,999
Finished Unleaded Motor Gasoline .....	1	3,468	107	19	0	0	0	0	3,596
Finished Aviation Gasoline .....	3	23	1	-1	0	0	0	0	26
Naphtha-Type Jet Fuel .....	0	210	0	1	0	0	0	1	210
Kerosene-Type Jet Fuel .....	(s)	815	26	-11	0	0	0	4	825
Kerosene .....	(s)	102	7	6	0	0	0	(s)	115
Distillate Fuel Oil .....	(s)	2,395	152	113	0	0	0	67	2,592
Residual Fuel Oil .....	0	846	691	68	0	0	0	196	1,410
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	141	13	(s)	0	0	0	4	150
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	259	1	(s)	0	0	0	16	245
Special Naphthas .....	3	54	20	1	0	0	0	3	75
Lubricants .....	0	143	8	8	0	0	0	16	142
Waxes .....	0	15	1	(s)	0	0	0	1	15
Petroleum Coke .....	0	414	0	7	0	0	0	199	221
Asphalt and Road Oil .....	0	385	8	1	0	0	0	1	392
Still Gas .....	0	548	0	0	0	0	0	0	548
Miscellaneous Products .....	3	57	16	(s)	0	0	0	1	75
<b>Total</b> .....	10,272	13,044	4,938	-110	205	2	12,571	776	15,001

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.  
Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.



Table 6. PAD District I, Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate) .....	E 2,352	0	27,455	1,651	-2,148	4,841	0	34,151	0	0	15,858
Natural Gas Liquids and LRGs .....	842	1,217	418	-292	0	2,311	0	94	147	4,256	5,959
Liquefied Petroleum Gases .....	722	1,217	334	-268	0	2,311	0	65	147	4,105	5,864
Other Products <sup>2</sup> .....	120	0	84	-24	0	0	0	29	0	151	95
Other Liquids .....	214	0	4,452	-3,240	0	37	0	2,292	0	-829	21,242
Other Hydrocarbons and Alcohol .....	214	0	0	-101	0	0	0	113	0	0	163
Unfinished Oils .....	0	0	4,132	-2,628	0	37	0	2,301	0	-760	15,665
Motor Gasoline Blending Components .....	0	0	319	-504	0	0	0	-115	0	-70	5,407
Aviation Gasoline Blending Components .....	0	0	0	-7	0	0	0	-7	0	0	7
Finished Petroleum Products .....	41	36,789	33,935	-6,511	0	69,090	0	0	1,024	132,320	172,723
Finished Motor Gasoline .....	41	17,573	7,306	-950	0	41,877	0	0	1	65,847	58,691
Finished Leaded Motor Gasoline .....	25	6,354	4,494	-71	0	15,879	0	0	1	26,681	30,036
Finished Unleaded Motor Gasoline .....	16	11,219	2,812	-879	0	25,998	0	0	0	39,166	28,655
Finished Aviation Gasoline .....	0	1	1	47	0	203	0	0	0	252	450
Naphtha-Type Jet Fuel .....	0	398	0	97	0	508	0	0	(s)	1,003	646
Kerosene-Type Jet Fuel .....	0	1,107	967	-528	0	8,336	0	0	(s)	9,882	8,977
Kerosene .....	0	48	300	-76	0	283	0	0	1	554	3,405
Distillate Fuel Oil .....	0	7,870	6,464	-5,582	0	13,870	0	0	127	22,496	67,506
Residual Fuel Oil .....	0	2,420	17,868	221	0	2,349	0	0	(s)	22,858	23,529
Naphtha and Other Oils for Petro. Feed .....	0	334	18	10	0	187	0	0	37	512	37
Special Naphthas .....	0	32	128	51	0	116	0	0	370	-43	689
Lubricants .....	0	696	207	310	0	613	0	0	100	1,726	3,009
Waxes .....	0	95	7	-1	0	7	0	0	6	102	155
Petroleum Coke .....	0	1,213	0	28	0	0	0	0	365	876	917
Asphalt and Road Oil .....	0	3,038	377	-82	0	445	0	0	2	3,777	4,319
Still Gas .....	0	1,747	0	0	0	0	0	0	0	1,747	0
Miscellaneous Products .....	0	217	292	-56	0	296	0	0	15	734	393
Total .....	3,449	38,006	66,260	-8,392	-2,148	76,279	0	36,537	1,171	135,747	215,782

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 7. PAD District II, Supply and Disposition of Crude Oil and Petroleum Products, September 1983**  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
<b>Crude Oil (including lease condensate)</b> .....	E 31,467	0	24,575	175	29,120	1,147	0	85,959	525	0	76,956
<b>Natural Gas Liquids and LRGs</b> .....	8,962	2,360	4,127	1,011	0	3,053	0	4,352	1,592	13,459	43,439
Liquefied Petroleum Gases .....	8,266	2,360	4,127	1,512	0	1,481	0	2,688	1,592	13,366	38,502
Other Products <sup>2</sup> .....	696	0	0	-501	0	1,572	0	1,664	0	103	4,937
<b>Other Liquids</b> .....	349	0	503	1,300	0	911	0	3,099	0	-36	23,744
Other Hydrocarbons and Alcohol .....	349	0	0	18	0	0	0	367	0	0	102
Unfinished Oils .....	0	0	403	951	0	-78	0	1,039	0	237	16,053
Motor Gasoline Blending Components .....	0	0	100	341	0	989	0	1,703	0	-273	7,469
Aviation Gasoline Blending Components .....	0	0	0	-10	0	0	0	-10	0	0	120
<b>Finished Petroleum Products</b> .....	6	94,576	604	-1,528	0	21,544	0	0	439	114,764	123,094
Finished Motor Gasoline .....	0	53,901	73	-1,281	0	12,933	0	0	164	65,462	58,242
Finished Leaded Motor Gasoline .....	0	24,280	65	1,490	0	6,474	0	0	164	32,145	28,890
Finished Unleaded Motor Gasoline .....	0	29,621	8	-2,771	0	6,459	0	0	0	33,317	28,352
Finished Aviation Gasoline .....	0	92	0	-53	0	185	0	0	0	224	653
Naphtha-Type Jet Fuel .....	0	882	0	122	0	131	0	0	0	1,135	1,364
Kerosene-Type Jet Fuel .....	0	3,517	0	320	0	1,353	0	0	0	5,190	7,511
Kerosene .....	0	705	1	-121	0	71	0	0	4	652	2,099
Distillate Fuel Oil .....	0	19,962	175	-2,433	0	6,804	0	0	0	24,508	39,121
Residual Fuel Oil .....	0	1,826	299	208	0	-743	0	0	0	1,590	3,462
Naphtha and Other Oils for Petro. Feed. ....	0	1,042	2	11	0	13	0	0	74	994	227
Special Naphthas .....	0	478	38	39	0	114	0	0	1	668	550
Lubricants .....	0	680	9	55	0	265	0	0	19	990	1,923
Waxes .....	0	30	2	15	0	0	0	0	(s)	47	73
Petroleum Coke .....	0	3,173	0	61	0	0	0	0	175	3,059	723
Asphalt and Road Oil .....	0	4,112	1	1,594	0	608	0	0	(s)	6,315	6,917
Still Gas .....	0	4,006	0	0	0	0	0	0	0	4,006	0
Miscellaneous Products .....	6	170	4	-65	0	-190	0	0	(s)	-75	229
<b>Total</b> .....	40,784	96,936	29,809	958	29,120	26,655	0	93,410	2,656	128,197	267,233

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 8. PAD District III, Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels)

Commodity	Supply				Disposition				Ending Stocks		
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs		Exports	Products Supplied
Crude Oil (including lease condensate)	E 124,455	0	67,158	-7,190	-22,765	14,383	-4	176,018	0	27	522,543
Natural Gas Liquids and LRGs	34,393	6,061	374	-518	0	-4,137	0	8,246	658	27,269	81,542
Liquefied Petroleum Gases	27,549	6,061	374	-1,557	0	-3,657	0	3,684	658	24,428	70,417
Other Products <sup>2</sup>	6,844	0	0	1,039	0	-480	0	4,562	0	2,841	11,125
Other Liquids	614	0	4,165	-906	0	-1,081	0	8,296	0	-5,504	72,883
Other Hydrocarbons and Alcohol	614	0	0	-6	0	0	0	608	0	0	123
Unfinished Oils	0	0	4,009	-1,440	0	-92	0	5,578	0	-3,101	54,718
Motor Gasoline Blending Components	0	0	156	492	0	-989	0	2,062	0	-2,403	17,884
Aviation Gasoline Blending Components	0	0	0	48	0	0	0	48	0	0	158
Finished Petroleum Products	307	192,732	4,067	-9,435	0	-94,020	0	0	5,592	88,060	129,479
Finished Motor Gasoline	0	88,907	714	-3,199	0	-56,230	0	0	(s)	30,191	47,085
Finished Leaded Motor Gasoline	0	37,121	460	-1,108	0	-23,093	0	0	(s)	13,379	23,488
Finished Unleaded Motor Gasoline	0	51,786	254	-2,091	0	-33,137	0	0	0	16,812	23,597
Finished Aviation Gasoline	159	360	0	85	0	-413	0	0	0	191	836
Naphtha-Type Jet Fuel	0	2,747	0	-150	0	-854	0	0	0	1,743	2,564
Kerosene-Type Jet Fuel	0	14,150	176	-413	0	-10,305	0	0	0	3,368	11,618
Kerosene	3	2,563	(s)	-674	0	-354	0	0	240	1,538	3,275
Distillate Fuel Oil	1	38,880	846	-3,388	0	-20,875	0	0	(s)	15,261	34,659
Residual Fuel Oil	0	11,082	1,663	-558	0	-2,542	0	0	203	7,768	13,823
Naphtha and Other Oils for Petro. Feed	0	10,421	22	-153	0	-200	0	0	1,877	9,448	3,220
Special Naphthas	97	1,096	595	-170	0	-230	0	0	642	1,357	1,590
Lubricants	0	2,921	23	27	0	-888	0	0	31	1,707	4,747
Waxes	0	235	22	57	0	-7	0	0	376	284	464
Petroleum Coke	0	5,267	0	-432	0	0	0	0	24	2,671	951
Asphalt and Road Oil	0	4,804	0	-233	0	-1,053	0	0	2,164	3,518	3,665
Still Gas	0	7,985	0	0	0	0	0	0	(s)	7,985	0
Miscellaneous Products	47	1,314	8	-234	0	-69	0	0	0	1,030	982
Total	159,769	198,793	75,764	-18,049	-22,765	-84,855	-4	192,560	6,249	109,851	806,447

1 Unaccounted for crude oil is a balancing figure.

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV, Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels)

Commodity	Supply					Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b>	E 16,599	0	1,182	-351	-3,807	0	0	13,618	0	5
<b>Natural Gas Liquids and LRGs</b>	2,329	154	395	-54	0	-1,227	0	531	1	1,065
Liquefied Petroleum Gases	702	154	341	-51	0	-135	0	350	1	660
Other Products <sup>2</sup>	1,627	0	54	-3	0	-1,092	0	181	0	405
<b>Other Liquids</b>	0	0	91	-106	0	0	0	-658	0	643
Other Hydrocarbons and Alcohol	0	0	0	1	0	0	0	1	0	0
Unfinished Oils	0	0	91	-19	0	0	0	-649	0	721
Motor Gasoline Blending Components	0	0	0	-88	0	0	0	-10	0	-78
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0
<b>Finished Petroleum Products</b>	9	13,569	149	884	0	176	0	0	4	14,784
Finished Motor Gasoline	7	6,804	54	125	0	168	0	0	(s)	7,158
Finished Leaded Motor Gasoline	7	4,224	54	140	0	-22	0	0	(s)	4,403
Finished Unleaded Motor Gasoline	0	2,580	0	-15	0	190	0	0	0	2,755
Finished Aviation Gasoline	0	23	0	11	0	25	0	0	0	59
Naphtha-Type Jet Fuel	0	363	0	-13	0	-92	0	0	0	258
Kerosene-Type Jet Fuel	0	685	0	-112	0	438	0	0	0	1,011
Kerosene	0	-3	0	-5	0	0	0	0	0	-8
Distillate Fuel Oil	0	3,629	63	355	0	-363	0	0	0	3,684
Residual Fuel Oil	0	345	31	-2	0	0	0	0	0	374
Naphtha and Other Oils for Petro. Feed	0	0	0	0	0	0	0	0	2	-2
Special Naphthas	0	3	0	0	0	0	0	0	0	3
Lubricants	0	21	(s)	6	0	0	0	0	1	27
Waxes	0	10	0	1	0	0	0	0	0	11
Petroleum Coke	0	297	0	5	0	0	0	0	0	302
Asphalt and Road Oil	0	833	0	504	0	0	0	0	0	148
Still Gas	0	528	0	0	0	0	0	0	1	566
Miscellaneous Products	2	30	(s)	9	0	0	0	0	0	0
<b>Total</b>	<b>18,937</b>	<b>13,723</b>	<b>1,818</b>	<b>373</b>	<b>-3,807</b>	<b>-1,051</b>	<b>0</b>	<b>13,491</b>	<b>5</b>	<b>16,498</b>
										<b>27,352</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 10. PAD District V, Supply and Disposition of Crude Oil and Petroleum Products, September 1983  
(Thousand Barrels)

Commodity	Supply					Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b> .....	85,101	0	6,248	-28	-587	-20,371	20	63,594	4,790	1,959
<b>Natural Gas Liquids and LRGs</b> .....	1,041	1,120	605	-305	0	0	0	579	92	1,790
Liquefied Petroleum Gases .....	590	1,120	168	-320	0	0	0	306	92	1,790
Other Products <sup>2</sup> .....	451	0	437	15	0	0	0	273	0	630
<b>Other Liquids</b> .....	620	0	665	2,361	0	133	0	3,292	0	487
Other Hydrocarbons and Alcohol .....	620	0	0	-2	0	0	0	618	0	0
Unfinished Oils .....	0	0	0	1,004	0	133	0	1,646	0	0
Motor Gasoline Blending Components .....	0	0	665	1,344	0	0	0	1,013	0	-509
Aviation Gasoline Blending Components .....	0	0	0	15	0	0	0	15	0	996
<b>Finished Petroleum Products</b> .....	0	69,926	1,461	-1,690	0	3,210	0	0	5,569	67,338
Finished Motor Gasoline .....	0	30,219	417	504	0	1,252	0	0	245	32,147
Finished Leaded Motor Gasoline .....	0	13,172	28	346	0	762	0	0	245	14,063
Finished Unleaded Motor Gasoline .....	0	17,047	389	158	0	490	0	0	0	18,084
Finished Aviation Gasoline .....	0	331	0	-72	0	0	0	0	0	259
Naphtha-Type Jet Fuel .....	0	1,543	0	-316	0	307	0	0	0	1,534
Kerosene-Type Jet Fuel .....	0	7,420	94	-603	0	178	0	0	29	7,059
Kerosene .....	0	200	(s)	-45	0	0	0	0	(s)	155
Distillate Fuel Oil .....	0	11,403	51	-160	0	564	0	0	768	11,090
Residual Fuel Oil .....	0	8,775	838	-1,267	0	936	0	0	2,155	7,126
Naphtha and Other Oils for Petro. Feed .....	0	556	0	-105	0	0	0	0	6	445
Special Naphthas .....	0	109	15	-16	0	0	0	0	1	107
Lubricants .....	0	354	9	98	0	10	0	0	59	412
Waxes .....	0	55	14	-1	0	0	0	0	6	62
Petroleum Coke .....	0	2,935	0	-37	0	0	0	0	0	2,935
Asphalt and Road Oil .....	0	2,357	12	346	0	0	0	0	2,294	604
Still Gas .....	0	3,469	0	0	0	0	0	0	1	2,715
Miscellaneous Products .....	0	200	11	-16	0	-37	0	0	0	3,469
<b>Total</b> .....	86,762	71,046	8,980	338	-587	-17,028	20	67,465	10,451	71,574
										175,335

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Includes natural gasoline, isopentane, unrefined stream, and plant condensate.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Continued

Table 11. Production of Crude Oil (Including Lease Condensate) by PAD District and State, for the Most Currently Available Month,<sup>1</sup> July 1983  
(Thousand Barrels)

PAD District and State	Production	
	Total	Daily Average
<b>PAD District I</b>		
Florida .....	1,538	50
New York .....	E 71	2
Pennsylvania .....	E 364	12
Virginia .....	E 4	(s)
West Virginia .....	304	10
Adjustment 2 .....	264	9
<b>Total PAD District I</b> .....	<b>E 2,545</b>	<b>82</b>
<b>PAD District II</b>		
Illinois .....	2,540	82
Indiana .....	434	14
Kansas .....	6,063	196
Kentucky .....	620	20
Michigan .....	2,579	83
Missouri .....	E 17	1
Nebraska .....	543	18
North Dakota .....	4,247	137
Ohio .....	E 1,238	40
Oklahoma .....	12,823	414
South Dakota .....	98	3
Tennessee .....	92	3
Adjustment 2 .....	865	28
<b>Total PAD District II</b> .....	<b>E 32,159</b>	<b>1,037</b>
<b>PAD District III</b>		
Alabama .....	1,596	51
Arkansas .....	E 1,601	52
Louisiana .....	E 37,453	1,208
Gulf Coast .....	2,835	91
Rest Of State .....	E 40,288	1,300
Total Louisiana .....	2,623	85
Mississippi .....		
New Mexico .....	496	16
Northwestern .....	5,770	186
Southeastern .....	6,266	202
Total New Mexico .....		
Texas .....	2,087	67
TRRC District 01 .....	3,445	111
TRRC District 02 .....	E 10,842	350
TRRC District 03 .....	2,345	76
TRRC District 04 .....	786	25
TRRC District 05 .....	3,536	114
TRRC District 06, excluding East Texas .....	2,878	93
TRRC District 07B .....	2,884	93
TRRC District 07C .....	19,350	624
TRRC District 08 .....	19,025	614
TRRC District 08A .....	3,143	101
TRRC District 09 .....	1,803	58
TRRC District 10 .....	4,289	138
East Texas .....	E 76,413	2,465
Total Texas .....	-416	-13
Adjustment 2 .....		
<b>Total PAD District III</b> .....	<b>E 128,371</b>	<b>4,141</b>

See footnotes at end of table.

PAD District and State

PAD District and State	Production	
	Total	Daily Average
<b>PAD District IV</b>		
Colorado .....	E 2,337	75
Montana .....	E 2,626	85
Utah .....	E 2,446	79
Wyoming .....	E 9,607	310
Adjustment 2 .....	555	18
<b>Total PAD District IV</b> .....	<b>E 17,571</b>	<b>567</b>
<b>PAD District V</b>		
Alaska .....	2,069	67
South Alaska .....	51,107	1,649
North Slope .....	-327	-11
Adjustment for Alaska <sup>2</sup> .....	52,849	1,705
Total Alaska .....	20	1
Arizona .....		
California .....	6,358	205
Central Coastal .....	21,504	684
East Central .....	15	(s)
North .....	6,631	214
South .....	34,508	1,113
Total California .....	49	2
Nevada .....	-24	-1
Adjustment for Arizona, California, and Nevada <sup>2</sup> .....	87,402	2,819
<b>Total PAD District V</b> .....	<b>E 268,048</b>	<b>8,647</b>
<b>United States Total</b> .....		

<sup>1</sup> Includes the following offshore production (thousands of barrels):

Alaska: 1,798;  
California: Federal- 2,628, State- 3,067;  
Louisiana: Federal- E 25,111, State- 2,112;  
Texas: Federal- E 1,675, State- 226;  
U.S. Total- E 36,617.

<sup>2</sup> These adjustments are used to reconcile the national and PADD level sums of the State data with the independently estimated U.S. and Alaskan figures shown in the Summary Statistics portion of this issue and with the PADD level figures published in a previous issue. Final data at the State, PAD District and national levels will be published without adjustments in the Petroleum Supply Annual.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

E = Estimated.

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities. Source: See Explanatory Notes on Data Collection and Estimation.

**Table 13. Refinery Input of Crude Oil and Petroleum Products by PAD District, September 1983**  
(Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total		Dist. IV Rocky Mt.	Dist. V West Coast
Crude Oil (including lease condensate) .....	32,674	1,477	34,151	1,878	57,492	7,741	18,848	85,959	14,814	91,735	62,220	4,971	2,278	176,018	13,618	63,594	373,340
<b>Natural Gas Liquids</b>																	
Natural Gasoline and Isopentane .....	29	0	29	0	437	235	880	1,552	998	2,145	478	40	103	3,764	114	273	5,732
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	103	0	9	112	0	611	9	177	1	798	67	0	977
Liquefied Petroleum Gases .....	65	0	65	124	1,551	264	749	2,688	495	1,621	1,451	87	30	3,684	350	306	7,093
Ethane .....	0	0	0	0	0	0	0	0	0	0	0	0	0	69	0	0	69
Propane .....	0	0	0	0	64	23	0	87	0	3	35	0	0	38	8	0	133
Butane .....	0	0	0	0	771	181	375	1,381	159	1,248	604	6	0	2,017	206	171	3,775
Butane-Propane Mixtures .....	0	0	0	0	3	0	0	3	0	90	36	0	4	130	84	44	261
Ethane-Propane Mixtures .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane .....	65	0	65	70	713	60	374	1,217	336	280	707	81	26	1,430	52	91	2,855
<b>Other Liquids</b>																	
Other Hydrocarbons and Alcohol .....	113	0	113	0	348	0	19	367	34	366	206	0	2	608	1	618	1,707
Unfinished Oil (net) .....	2,429	-128	2,301	46	449	-135	679	1,039	309	4,469	507	192	101	5,578	-649	1,646	9,915
Motor Gasoline Blending .....																	
Components (net) .....	-133	18	-115	-6	555	23	1,131	1,703	-450	1,492	1,035	22	-37	2,062	-10	1,013	4,653
Aviation Gasoline Blending .....																	
Components (net) .....	-7	0	-7	0	4	0	-14	-10	0	2	46	0	0	48	0	15	46
Total Input to Refineries .....	35,170	1,367	36,537	2,042	60,939	8,128	22,301	93,410	16,200	102,441	65,952	5,489	2,478	192,560	13,491	67,465	403,463
<b>Crude Oil Distillation</b>																	
Gross Input (daily average) .....	1,110	49	1,159	68	1,945	270	635	2,919	505	3,169	1,848	176	77	5,775	458	2,148	12,457
Operable Capacity (daily average) .....	1,473	174	1,647	66	2,351	295	804	3,515	611	3,902	2,532	295	107	7,447	559	3,109	16,278
Operating Ratio (percent) <sup>1</sup> .....	75.3	28.2	70.4	103.4	82.7	91.5	79.0	83.0	82.7	81.2	73.0	59.6	71.7	77.5	81.9	69.1	76.5
<b>Crude Oil Qualities</b>																	
Sulfur Content, Weighted Average (percent) .....	1.09	.13	1.05	.81	.93	1.51	.57	.90	.65	.88	.93	1.39	.70	.89	.91	1.00	.93
API Gravity, Weighted Average .....	31.31	42.49	31.77	35.76	35.61	31.63	37.49	35.67	37.29	35.17	33.59	31.57	39.59	34.74	35.24	25.85	33.16
<b>Operable Capacity (daily average)</b>																	
Operating .....	1,473	174	1,647	66	2,351	295	804	3,515	611	3,902	2,532	295	107	7,447	559	3,109	16,278
Idle .....	1,330	50	1,380	66	2,170	295	685	3,215	573	3,543	2,268	227	107	6,717	536	2,886	14,735
	143	124	267	0	181	0	119	300	38	359	264	68	0	730	23	223	1,543

<sup>1</sup> Represents gross input divided by operable capacity.  
Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.



Table 14. Refinery Production of Petroleum Products by PAD District, September 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III			Total		Texas		La.		Rocky		West		United States
	East Coast	Appalachian	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	Rocky Mts.	Dist. IV	Dist. V	Coast	
Liquefied Refinery Gases	1,217	0	1,217	36	1,787	182	355	2,360	223	2,774	2,907	62	95	6,061	223	2,774	2,907	154	154	1,120	10,912	
For Petrochemical Feedstock Use	400	0	400	0	197	0	43	240	36	1,293	1,626	16	0	2,971	36	1,293	1,626	-6	-6	172	3,777	
For Other Uses	817	0	817	36	1,590	182	312	2,120	187	1,481	1,281	46	95	3,090	187	1,481	1,281	160	160	948	7,135	
Ethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	573	
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	371	
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	
Propane	1,016	0	1,016	36	1,752	186	490	2,464	188	2,119	1,407	30	58	3,802	188	2,119	1,407	180	180	758	8,220	
For Petrochemical Feedstock Use	319	0	319	0	197	0	43	240	36	751	165	0	0	952	36	751	165	0	0	159	1,670	
For Other Uses	697	0	697	36	1,555	186	447	2,224	152	1,368	1,242	30	58	2,850	152	1,368	1,242	180	180	599	6,550	
Butane	201	0	201	0	31	-4	-135	-108	33	-11	1,489	30	17	1,558	33	-11	1,489	-8	-8	292	1,935	
For Petrochemical Feedstock Use	81	0	81	0	0	0	0	0	0	168	1,459	16	0	1,643	0	168	1,459	0	0	13	1,737	
For Other Uses	120	0	120	0	31	-4	-135	-108	33	-179	30	14	17	-85	33	-179	30	-12	-12	279	198	
Butane-Propane Mixtures	0	0	0	0	4	0	0	4	2	98	1	2	20	123	2	98	1	0	0	70	185	
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
For Other Uses	0	0	0	0	4	0	0	4	2	98	1	2	20	123	2	98	1	0	0	70	185	
Isobutane for Petro. Feed. Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Finished Motor Gasoline	17,354	219	17,573	1,081	35,280	4,274	13,266	53,901	8,342	46,405	31,623	1,507	1,030	88,907	8,342	46,405	31,623	6,804	6,804	30,219	197,404	
Finished Leaded Motor Gasoline	6,209	145	6,354	514	14,118	2,218	7,430	24,280	4,324	19,381	12,103	703	610	37,121	4,324	19,381	12,103	4,224	4,224	13,172	85,151	
Finished Unleaded Motor Gasoline	11,145	74	11,219	567	21,162	2,056	5,836	29,821	4,018	27,024	19,520	804	420	51,786	4,018	27,024	19,520	2,580	2,580	17,047	112,253	
Finished Aviation Gasoline	1	0	1	0	83	0	9	92	17	221	122	0	0	360	17	221	122	0	0	331	807	
Naphtha-Type Jet Fuel	352	46	398	94	378	85	325	882	681	1,023	449	192	402	2,747	681	1,023	449	363	363	1,543	5,933	
Kerosene-Type Jet Fuel	1,107	0	1,107	3	2,668	428	418	3,517	694	6,821	6,618	5	12	14,150	694	6,821	6,618	7,420	7,420	26,879	36,879	
Kerosene	29	19	48	100	390	51	164	705	36	1,422	1,043	32	30	2,563	36	1,422	1,043	-3	-3	200	3,513	
Distillate Fuel Oil	7,439	431	7,870	478	12,138	1,757	5,589	19,962	3,063	21,054	12,472	1,545	746	38,880	3,063	21,054	12,472	3,629	3,629	11,403	81,744	
Residual Fuel Oil	2,379	41	2,420	80	1,300	176	270	1,826	635	7,619	2,494	287	47	11,082	635	7,619	2,494	345	345	8,775	24,448	
Naphtha < 400 Deg. For Petro. Feed. Use	329	0	329	0	796	0	86	882	535	2,528	255	87	0	3,405	535	2,528	255	0	0	159	4,775	
Other Oils > 400 Deg. For Petro. Feed. Use	5	0	5	0	159	0	1	160	216	4,747	2,053	164	0	7,016	216	4,747	2,053	0	0	397	7,578	
Special Naphthas	4	28	32	0	314	0	164	478	20	852	60	164	0	1,096	20	852	60	3	3	109	1,718	
Lubricants	330	366	696	0	422	0	258	680	2	1,788	800	331	0	2,921	2	1,788	800	21	21	354	4,672	
Waxes	23	72	95	0	9	0	21	30	5	101	65	64	0	235	5	101	65	10	10	55	425	
Petroleum Coke	1,213	0	1,213	21	2,232	278	642	3,173	298	2,656	2,238	64	11	5,267	298	2,656	2,238	297	297	2,935	12,885	
Marketable	462	0	462	0	1,222	157	465	1,844	62	1,262	1,419	56	0	2,799	62	1,262	1,419	135	135	2,207	7,447	
Catalyst	751	0	751	21	1,010	121	177	1,329	236	1,394	819	8	11	2,468	236	1,394	819	162	162	728	5,438	
Asphalt and Road Oil	3,038	0	3,038	150	2,853	818	491	4,112	631	718	2,393	967	95	4,804	631	718	2,393	833	833	2,357	15,144	
Still Gas	1,718	29	1,747	57	2,967	256	726	4,006	454	4,735	2,550	203	43	7,985	454	4,735	2,550	529	529	3,469	17,736	
For Petrochemical Feedstock Use	293	0	293	0	2	0	0	2	6	553	91	0	0	650	6	553	91	33	33	9	987	
For Other Uses	1,425	29	1,454	57	2,965	256	726	4,004	448	4,182	2,459	203	43	7,335	448	4,182	2,459	496	496	3,460	16,749	
Miscellaneous Products	177	40	217	3	94	18	55	170	70	819	374	51	0	1,314	70	819	374	30	30	200	1,931	
Fuel Use	0	13	13	0	0	0	10	10	0	4	249	0	0	253	0	4	249	1	1	27	304	
Non-Fuel Use	177	27	204	3	94	18	45	160	70	815	125	51	0	1,061	70	815	125	29	29	173	1,627	
Total Production	36,715	1,291	38,006	2,103	63,670	8,323	22,840	96,936	15,922	106,283	68,516	5,561	2,511	198,793	15,922	106,283	68,516	13,723	13,723	71,046	418,504	
Processing Gain(-) or Loss(+) <sup>1</sup>	-1,545	76	-1,469	-61	-2,731	-195	-539	-3,526	278	-3,842	-2,564	-72	-33	-6,233	278	-3,842	-2,564	-232	-232	-3,581	-15,041	

<sup>1</sup> Represents the arithmetic difference between the production and consumption figures.

<sup>1</sup> Represents the arithmetic difference between input and output.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 15. Percent Refinery Yield of Petroleum Products by PAD District, September 1983

Commodity	PAD District I			PAD District II					PAD District III			PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okl., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico		Total	Rocky Mts.	Dist. V West Coast
Finished Motor Gasoline <sup>2</sup> .....	49.2	14.9	48.0	50.1	55.7	49.3	53.7	54.6	48.0	41.8	45.3	22.9	39.1	42.9	48.4	42.9	46.2
Finished Aviation Gasoline <sup>3</sup> .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Refinery Gases .....	3.5	0	3.3	1.9	3.1	2.4	1.8	2.7	1.5	2.9	4.6	1.2	4.0	3.3	1.2	1.7	2.8
Naphtha-Type Jet Fuel .....	1.0	3.4	1.1	4.9	7	1.1	1.7	1.0	4.5	1.1	7	3.7	16.9	1.5	2.8	2.4	1.5
Kerosene-Type Jet Fuel .....	3.2	0	3.0	2	4.6	5.6	2.1	4.0	4.6	7.1	10.6	1	5	7.8	5.3	11.4	7.0
Kerosene .....	1	1.4	1	5.2	7	7	8	8	2	1.5	1.7	6	1.3	1.4	0	3	9
Distillate Fuel Oil .....	21.2	31.9	21.6	24.8	20.9	23.1	28.6	22.9	20.3	21.9	19.9	29.9	31.4	21.4	28.0	17.5	21.3
Residual Fuel Oil .....	6.8	3.0	6.6	4.2	2.2	2.3	1.4	2.1	4.2	7.9	4.0	5.6	2.0	6.1	2.7	13.5	6.4
Naphtha < 400 Deg. F. Petro. Feed Use .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Oils > 400 Deg. F. Petro. Feed Use .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Special Naphthas .....	0	21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lubricants .....	0	27.1	1.9	0	7	0	1.3	0	0	1.9	1.3	6.4	0	1.6	0	2	1.2
Waxes .....	0	5.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum Coke .....	3.5	0	3.3	1.1	3.9	3.7	3.3	3.6	2.0	2.8	3.6	1.2	5	2.9	2.3	4.5	3.4
Asphalt and Road Oil .....	8.7	0	8.3	7.8	4.6	10.8	2.5	4.7	4.2	7	3.8	18.7	4.0	2.6	6.4	3.6	4.0
Still Gas .....	4.9	2.1	4.8	3.0	5.1	3.4	3.7	4.6	3.0	4.9	4.1	3.9	1.8	4.4	4.1	5.3	4.6
Miscellaneous Products .....	5	3.0	6	2	2	2	3	2	5	9	6	1.0	0	7	2	3	5
Processing Gain(-) or Loss(+) <sup>4</sup> .....	-4.4	5.6	-4.0	-3.2	-4.7	-2.6	-2.8	-4.1	1.8	-4.0	-4.1	-1.4	-1.4	-3.4	-1.8	-5.5	-3.9

<sup>1</sup> Based on crude oil input and net reruns of unfinished oils.<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components.<sup>4</sup> Represents the difference between input and production.

Note: Totals may not equal sum of components due to independent rounding.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 16. Imports of Crude Oil and Petroleum Products by PAD District, September 1983  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
<b>Crude Oil (including lease condensate) <sup>1 2</sup></b>	<b>27,455</b>	<b>24,575</b>	<b>67,158</b>	<b>1,182</b>	<b>6,248</b>	<b>126,619</b>
<b>Natural Gas Liquids</b>						
Natural Gasoline and Isopentane	418	4,127	374	395	605	5,919
Plant Condensate	0	0	0	0	437	437
Liquefied Petroleum Gases	84	0	0	54	0	138
Ethane	334	4,127	374	341	168	5,344
Propane	0	1,431	0	0	0	1,431
Butane	217	912	0	185	50	1,345
Butane-Propane Mixtures	118	625	0	176	117	1,035
Ethane-Propane Mixtures	0	0	374	0	0	374
<b>Other Liquids <sup>1</sup></b>	<b>0</b>	<b>1,159</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,159</b>
Unfinished Oils <sup>1</sup>	4,452	503	4,165	91	665	9,876
Motor Gasoline Blending Components	4,132	403	4,009	91	0	8,636
Aviation Gasoline Blending Components	319	100	156	0	665	1,241
<b>Finished Petroleum Products</b>	<b>33,935</b>	<b>604</b>	<b>4,067</b>	<b>149</b>	<b>1,461</b>	<b>40,217</b>
Finished Motor Gasoline	7,306	73	714	54	417	8,564
Finished Leaded Motor Gasoline	4,494	65	460	54	28	5,101
Finished Unleaded Motor Gasoline	2,812	8	254	0	389	3,463
Naphtha-Type Jet Fuel	1	0	0	0	0	1
Kerosene-Type Jet Fuel	0	0	0	0	0	0
Bonded Aircraft Fuel	967	0	176	0	0	1,143
Other	0	0	0	0	94	94
Kerosene	967	0	176	0	0	1,143
Distillate Fuel Oil	300	1	176	0	0	477
Bonded Ships Bunkers	6,464	175	(s)	0	94	6,733
Other	0	0	846	63	(s)	910
Residual Fuel Oil	6,464	175	0	0	51	7,599
Bonded Ships Bunkers	17,868	299	846	63	0	20,076
Other	0	0	1,663	31	838	2,532
Naphtha < 400 Deg. for Petro. Feed Use	17,868	299	0	0	0	18,167
Other Oils > 400 Deg. for Petro. Feed Use	18	2	1,663	31	838	2,542
Special Naphthas	0	0	22	0	0	22
Lubricants	128	38	0	0	0	166
Waxes	207	9	595	0	0	811
Asphalt and Road Oil	7	2	23	(s)	15	47
Miscellaneous Products	377	1	22	0	9	409
<b>Total Imports</b>	<b>66,260</b>	<b>29,809</b>	<b>75,764</b>	<b>1,818</b>	<b>8,980</b>	<b>182,631</b>

<sup>1</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>2</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding. Sources: See Explanatory Notes on Data Collection and Estimation.

Table 17. Imports of Crude Oil and Petroleum Products by Source and PAD District, September 1983  
(Thousand Barrels)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
All PAD Districts														
<b>Arab OPEC</b>														
Algeria .....	9,455	0	335	0	0	0	0	687	1,927	0	0	2,949	12,404	413
Iraq .....	771	0	0	0	0	0	0	0	0	0	0	0	771	26
Kuwait .....	0	0	294	0	0	0	0	0	521	0	0	815	815	27
Qatar .....	0	0	0	0	0	0	0	0	0	0	2	2	2	(s)
Saudi Arabia .....	16,657	0	0	319	0	0	0	0	620	0	(s)	939	17,596	587
United Arab Emirates .....	352	0	0	0	0	0	0	0	0	0	292	292	644	21
Subtotal Arab OPEC .....	27,235	0	629	319	0	0	0	687	3,069	0	294	4,998	32,233	1,074
<b>Other OPEC</b>														
Ecuador .....	1,472	0	0	0	0	0	0	0	186	0	0	186	1,658	55
Gabon .....	2,984	0	0	0	0	0	0	0	0	0	0	0	2,984	99
Indonesia .....	14,405	0	0	0	240	28	0	0	373	0	437	1,079	15,483	516
Iran .....	2,583	0	0	0	0	0	0	0	0	0	0	0	2,583	86
Nigeria .....	9,707	0	0	0	0	0	0	0	7	0	0	7	9,714	324
Venezuela .....	7,345	0	0	0	1,445	215	0	2,041	2,925	181	0	6,807	14,152	472
Subtotal Other OPEC .....	38,495	0	0	0	1,686	243	0	2,041	3,491	181	437	8,079	46,574	1,552
<b>Other</b>														
Angola .....	2,888	0	0	0	0	0	0	0	257	0	0	257	3,145	105
Australia .....	0	0	0	0	0	0	0	0	0	0	22	22	22	1
Bahamas .....	0	0	2,251	0	0	253	0	758	653	193	0	4,109	4,109	137
Brazil .....	0	0	0	0	1,466	0	0	0	492	0	0	1,958	1,958	65
Canada .....	8,130	4,863	380	100	436	0	18	713	690	61	292	7,554	15,694	523
Congo .....	848	0	0	0	0	0	0	0	344	0	0	344	1,192	40
Egypt .....	1	0	0	0	0	0	0	0	0	0	(s)	0	(s)	(s)
France .....	0	0	0	0	0	0	0	0	200	0	0	200	200	7
Liberia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Malaysia .....	0	0	0	0	123	12	(s)	385	18	2	21	1,672	24,960	832
Mexico .....	23,288	374	208	0	488	176	0	573	1,382	95	(s)	1,382	1,382	46
Netherlands .....	0	(s)	0	36	679	0	0	213	4,557	0	283	7,536	7,536	251
Netherlands Antilles .....	0	0	2,331	0	150	0	0	0	0	0	0	0	2,314	77
Norway .....	2,314	0	0	0	0	0	0	0	0	0	0	0	3,947	132
Oman .....	3,947	0	0	0	0	0	0	0	0	0	0	0	786	26
People's Republic of China .....	0	0	0	786	0	0	0	0	523	0	0	523	523	17
Peru .....	0	0	0	0	204	0	282	0	0	128	158	1,001	1,001	33
Puerto Rico .....	0	0	230	0	467	0	0	274	0	0	0	740	740	25
Romania .....	0	0	0	0	0	0	0	0	64	0	0	64	64	2
Spain .....	0	0	0	0	0	0	0	219	(s)	29	17	265	2,475	82
Trinidad and Tobago .....	2,209	0	0	0	0	0	0	0	323	0	40	604	14,165	472
United Kingdom .....	13,562	107	0	0	133	0	0	965	3,567	10	0	9,235	9,235	308
Virgin Islands .....	0	0	2,489	0	2,223	0	0	0	0	0	0	0	476	16
Zaire .....	476	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Western Hemisphere .....	0	0	0	0	0	0	0	0	1,008	31	0	1,039	1,039	35
Other Eastern Hemisphere .....	3,227	0	136	0	510	553	0	771	1,440	47	51	3,509	6,736	225
Subtotal Other .....	60,889	5,344	8,006	921	6,879	994	301	4,872	14,138	596	886	42,935	103,825	3,461
<b>Total Imports .....</b>	<b>126,619</b>	<b>5,344</b>	<b>8,636</b>	<b>1,241</b>	<b>8,564</b>	<b>1,237</b>	<b>301</b>	<b>7,599</b>	<b>20,698</b>	<b>776</b>	<b>1,617</b>	<b>56,012</b>	<b>182,632</b>	<b>6,088</b>

See footnotes at end of table.

Table 17. Imports of Crude Oil and Petroleum Products by Source and PAD District, September 1983  
(continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District I														
Arab OPEC														
Algeria	2,781	0	0	0	0	0	0	687	1,582	0	0	2,269	5,050	168
Kuwait	0	0	294	0	0	0	0	0	0	0	0	294	294	10
Saudi Arabia	2,893	0	0	319	0	0	0	0	0	0	(s)	319	3,212	107
United Arab Emirates	0	0	0	0	0	0	0	0	0	0	0	292	292	10
Subtotal Arab OPEC	5,674	0	294	319	0	0	0	687	1,582	0	292	3,174	8,848	295
Other OPEC														
Ecuador	0	0	0	0	0	0	0	0	186	0	0	186	186	6
Indonesia	3,465	0	0	0	0	0	0	0	0	0	0	0	3,465	115
Iran	1	0	0	0	0	0	0	0	0	0	0	0	1	(s)
Nigeria	834	0	0	0	0	0	0	0	0	0	0	0	834	28
Venezuela	2,621	0	0	0	1,445	215	0	1,569	2,921	0	0	6,151	8,772	292
Subtotal Other OPEC	6,921	0	0	0	1,445	215	0	1,569	3,108	0	0	6,337	13,258	442
Other														
Angola	1,553	0	0	0	0	0	0	0	257	0	0	257	1,810	60
Bahamas	0	0	659	0	0	253	0	387	503	0	0	1,802	1,802	60
Brazil	0	0	0	0	1,207	0	0	0	492	0	0	1,699	1,699	57
Canada	888	227	0	0	277	0	17	475	355	7	209	1,568	2,456	82
Congo	0	0	0	0	0	0	0	0	344	0	0	344	344	11
Egypt	1	0	0	0	0	0	0	0	0	0	0	0	1	(s)
France	0	0	0	0	0	0	0	0	0	0	(s)	0	0	(s)
Liberia	0	0	0	0	0	0	0	0	200	0	0	200	200	7
Mexico	2,822	0	0	0	287	0	0	381	(s)	0	0	669	3,491	116
Netherlands	0	0	0	0	679	0	0	573	0	22	0	1,274	1,274	42
Netherlands Antilles	0	(s)	2,331	0	150	0	0	213	4,168	0	283	7,147	7,147	238
Norway	572	0	0	0	0	0	0	0	0	0	0	0	572	19
Peru	0	0	0	0	0	0	0	0	523	0	0	523	523	17
Puerto Rico	0	0	290	0	204	0	282	0	0	70	158	944	944	31
Romania	0	0	0	0	467	0	0	274	0	0	0	740	740	25
Spain	0	0	0	0	0	0	0	0	64	0	0	64	64	2
Trinidad and Tobago	445	0	0	0	0	0	0	219	(s)	29	4	252	697	23
United Kingdom	8,021	107	0	0	133	0	0	0	323	0	40	604	8,625	287
Virgin Islands	0	0	618	0	2,223	0	0	965	3,566	0	0	7,373	7,373	246
Other Western Hemisphere	0	0	0	0	0	0	0	0	1,008	0	0	1,008	1,008	34
Other Eastern Hemisphere	559	0	0	0	234	499	0	721	1,374	(s)	0	2,828	3,387	113
Subtotal Other	14,861	334	3,839	0	5,861	752	300	4,209	13,178	128	694	29,294	44,155	1,472
Total Imports	27,455	334	4,132	319	7,306	967	300	6,464	17,868	128	986	38,805	66,261	2,209
PAD District II														
Arab OPEC														
Algeria	1,537	0	0	0	0	0	0	0	0	0	0	0	1,537	51
Iraq	771	0	0	0	0	0	0	0	0	0	0	0	771	26
Saudi Arabia	1,638	0	0	0	0	0	0	0	0	0	0	0	1,638	55
Subtotal Arab OPEC	3,946	0	0	0	0	0	0	0	0	0	0	0	3,946	132

See footnotes at end of table.

Table 17. Imports of Crude Oil and Petroleum Products by Source and PAD District, September 1983  
(continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District II														
<b>Other OPEC</b>														
Ecuador .....	376	0	0	0	0	0	0	0	0	0	0	0	376	13
Indonesia .....	1,933	0	0	0	0	0	0	0	0	0	0	0	1,933	64
Iran .....	925	0	0	0	0	0	0	0	0	0	0	0	925	31
Nigeria .....	1,104	0	0	0	0	0	0	0	0	0	0	0	1,104	37
Venezuela .....	560	0	0	0	0	0	0	0	0	0	0	0	560	19
Subtotal Other OPEC .....	4,899	0	0	0	0	0	0	0	0	0	0	0	4,899	163
<b>Other</b>														
Bahamas .....	0	0	194	0	0	0	0	0	0	0	0	194	194	6
Canada .....	5,907	4,127	209	100	73	0	1	175	299	38	19	5,040	10,947	365
Congo .....	848	0	0	0	0	0	0	0	0	0	0	0	848	28
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	4,355	0	0	0	0	0	0	0	0	0	0	0	4,355	145
Norway .....	357	0	0	0	0	0	0	0	0	0	0	0	357	12
Oman .....	1,521	0	0	0	0	0	0	0	0	0	0	0	1,521	51
Trinidad and Tobago .....	838	0	0	0	0	0	0	0	0	0	0	0	838	28
United Kingdom .....	1,022	0	0	0	0	0	0	0	0	0	(s)	(s)	1,022	34
Other Eastern Hemisphere .....	882	0	0	0	0	0	0	0	0	0	(s)	(s)	882	29
Subtotal Other .....	15,730	4,127	403	100	73	0	1	175	299	38	19	5,234	20,964	699
<b>Total Imports</b> .....	24,575	4,127	403	100	73	0	1	175	299	38	19	5,234	29,809	994
PAD District III														
<b>Arab OPEC</b>														
Algeria .....	5,137	0	335	0	0	0	0	0	345	0	0	680	5,817	194
Kuwait .....	0	0	0	0	0	0	0	0	521	0	0	521	521	17
Qatar .....	0	0	0	0	0	0	0	0	0	0	2	2	2	(s)
Saudi Arabia .....	12,126	0	0	0	0	0	0	0	620	0	0	620	12,746	425
United Arab Emirates .....	352	0	0	0	0	0	0	0	0	0	0	0	352	12
Subtotal Arab OPEC .....	17,615	0	335	0	0	0	0	0	1,486	0	2	1,824	19,439	648
<b>Other OPEC</b>														
Ecuador .....	1,095	0	0	0	0	0	0	0	0	0	0	0	1,095	37
Gabon .....	2,984	0	0	0	0	0	0	0	0	0	0	0	2,984	99
Indonesia .....	3,166	0	0	0	0	0	0	0	0	0	0	0	3,166	106
Iran .....	1,657	0	0	0	0	0	0	0	0	0	0	0	1,657	55
Nigeria .....	7,768	0	0	0	0	0	0	0	7	0	0	7	7,775	259
Venezuela .....	3,909	0	0	0	0	0	0	472	4	181	0	656	4,565	152
Subtotal Other OPEC .....	20,579	0	0	0	0	0	0	472	10	181	0	663	21,243	708
<b>Other</b>														
Angola .....	1,335	0	0	0	0	0	0	0	0	0	0	0	1,335	44
Australia .....	0	0	0	0	0	0	0	0	0	0	22	22	22	1
Bahamas .....	0	0	1,398	0	0	0	0	371	150	193	0	2,113	2,113	70
Brazil .....	0	0	0	0	259	0	0	0	0	0	0	259	259	9
Canada .....	(s)	0	80	0	0	0	0	0	0	0	0	80	80	3
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)

See footnotes at end of table.

Table 17. Imports of Crude Oil and Petroleum Products by Source and PAD District, September 1983  
(continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District III														
Other														
Mexico	16,111	374	208	0	200	176	(s)	2	14	2	2	980	17,090	570
Netherlands	0	0	0	36	0	0	0	0	0	73	(s)	108	108	4
Norway	1,385	0	0	0	0	0	0	0	0	0	0	0	1,385	46
Oman	2,426	0	0	0	0	0	0	0	0	0	0	0	2,426	81
People's Republic of China	0	0	0	120	0	0	0	0	0	0	0	120	120	4
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Trinidad and Tobago	926	0	0	0	0	0	0	0	0	58	0	58	58	31
United Kingdom	4,518	0	0	0	0	0	0	0	0	0	14	14	940	151
Virgin Islands	0	0	1,851	0	0	0	0	0	0	0	0	0	1,862	62
Zaire	476	0	0	0	0	0	0	0	1	10	0	0	4,518	16
Other Western Hemisphere	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere	1,786	0	136	0	254	0	0	0	0	31	0	31	31	1
Subtotal Other	28,964	374	3,674	156	714	176	(s)	374	166	414	72	6,119	2,258	75
Total Imports	67,158	374	4,009	156	714	176	(s)	846	1,663	595	74	8,606	75,764	2,525
PAD District IV														
Other														
Canada	1,182	341	91	0	54	0	0	63	31	0	55	636	1,818	61
Subtotal Other	1,182	341	91	0	54	0	0	63	31	0	55	636	1,818	61
Total Imports	1,182	341	91	0	54	0	0	63	31	0	55	636	1,818	61
PAD District V														
Other OPEC														
Indonesia	5,841	0	0	0	240	28	0	0	373	0	437	1,079	6,919	231
Venezuela	255	0	0	0	0	0	0	0	0	0	0	0	255	9
Subtotal Other OPEC	6,096	0	0	0	240	28	0	0	373	0	437	1,079	7,174	239
Other														
Canada	153	168	0	0	31	0	(s)	0	5	15	10	230	383	13
Malaysia	0	0	0	0	123	12	0	0	2	0	0	137	137	5
Mexico	0	0	0	0	0	0	0	1	3	0	19	23	23	1
Netherlands Antilles	0	0	0	0	0	0	0	0	389	0	0	389	389	13
People's Republic of China	0	0	0	665	0	0	0	0	0	0	0	665	665	22
Other Eastern Hemisphere	0	0	0	0	22	54	0	0	65	0	17	208	208	7
Subtotal Other	153	168	0	665	176	66	(s)	51	464	15	46	1,653	1,805	60
Total Imports	6,248	168	0	665	417	94	(s)	51	838	15	483	2,731	8,980	299

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, isopentane, plant condensate, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 18. Exports Of Crude Oil And Petroleum Products By PAD District, September 1983**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1</sup>	0	525	0	0	4,790	5,315
Liquefied Petroleum Gases	147	1,692	558	1	92	2,589
Ethane	(s)	0	0	0	0	(s)
Propane	127	689	408	(s)	37	1,260
Butane	19	1,003	250	1	55	1,329
Butane-Propane Mixtures	0	0	0	0	0	0
Finished Motor Gasoline	1	164	(s)	(s)	245	411
Naphtha-Type Jet Fuel	(s)	0	0	0	0	(s)
Kerosene-Type Jet Fuel	(s)	0	240	0	29	270
Kerosene	1	4	(s)	0	(s)	5
Distillate Fuel Oil	127	0	203	0	768	1,097
Residual Fuel Oil	(s)	0	1,877	0	2,155	4,032
Naphtha < 400 Deg. for Petrochem. Feedstock	37	8	118	2	5	171
Other Oils > 400 Deg. for Petrochem. Feedstock	(s)	66	523	0	1	591
Special Naphthas	370	1	31	0	1	403
Lubricants	100	19	376	1	59	555
Waxes	6	(s)	24	0	6	35
Petroleum Coke	365	175	2,164	0	2,294	4,998
Asphalt	2	(s)	(s)	1	1	3
Miscellaneous Products	15	(s)	35	0	5	56
Total Product Exports	1,171	2,130	6,249	5	5,661	15,216
Total Exports	1,171	2,656	6,249	5	10,451	20,531

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with

Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories

(especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical

Tracking Systems count these exchanges and shipments as imports and exports.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.



Table 19. Exports of Crude Oil and Petroleum Products by Destination, September 1983  
(Thousand Barrels)

Destination	Crude Oil 1	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Waxes	Petro-leum Coke	Asphalt	Other	Total	Total (Daily Average)
Argentina	0	0	0	0	0	0	0	7	(s)	0	0	(s)	8	(s)
Australia	0	0	0	0	0	0	0	1	(s)	220	1	3	225	7
Bahamas	0	4	1	(s)	100	384	0	2	0	0	0	0	491	16
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	64	2
Belgium & Luxembourg	0	(s)	0	0	0	0	0	5	(s)	503	0	2	510	17
Brazil	0	0	0	0	0	0	0	9	0	1	0	1	11	(s)
Cameroon	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Canada	525	1,706	405	0	2	378	3	57	3	299	1	92	3,472	116
China (Taiwan)	0	(s)	0	0	0	671	(s)	8	(s)	(s)	(s)	1	683	9
Colombia	0	6	0	0	0	0	(s)	10	(s)	(s)	0	1	24	23
Costa Rica	0	7	0	0	7	0	(s)	4	(s)	0	0	2	24	1
Denmark	0	0	0	0	0	0	0	1	(s)	0	0	0	1	(s)
Dominican Republic	0	63	0	0	0	0	0	3	(s)	0	0	0	1	(s)
Ecuador	0	90	0	0	0	0	0	1	(s)	0	0	1	67	2
Egypt	0	3	0	0	0	0	0	1	(s)	0	0	0	91	3
El Salvador	0	0	0	0	0	0	0	2	(s)	0	0	(s)	5	(s)
Finland	0	0	0	0	0	0	0	(s)	0	0	0	(s)	2	(s)
France	0	0	0	0	0	0	0	1	0	174	0	4	181	6
French Pacific Isl	0	(s)	0	0	0	0	(s)	(s)	0	0	0	0	(s)	(s)
Ghana	0	0	0	0	0	0	0	(s)	2	0	0	0	(s)	(s)
Greece	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Guatemala	0	2	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Honduras	0	68	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Hong Kong	0	(s)	0	0	0	0	0	3	0	0	0	1	72	2
India	0	1	0	0	0	0	0	9	(s)	0	0	1	10	(s)
Indonesia	0	(s)	0	0	0	0	0	2	(s)	0	(s)	0	3	(s)
Iran	0	0	0	0	(s)	0	0	29	(s)	0	0	11	41	1
Israel	0	0	0	0	0	0	0	0	(s)	0	0	1	(s)	(s)
Italy	0	2	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)
Ivory Coast	0	(s)	0	0	0	0	0	(s)	(s)	0	0	(s)	2	(s)
Jamaica	0	0	0	0	0	0	0	(s)	(s)	639	0	118	757	25
Japan	0	22	0	0	0	0	0	(s)	(s)	0	0	(s)	(s)	(s)
Jordan	0	(s)	0	0	49	632	7	18	(s)	0	0	56	23	1
Korea, Republic of	0	0	0	0	0	0	0	(s)	(s)	1,243	0	0	2,006	67
Kuwait	0	1	0	0	0	483	0	2	(s)	33	0	3	522	17
Lebanon	0	0	0	0	(s)	0	0	2	(s)	0	0	1	(s)	(s)
Liberia	0	(s)	0	0	0	0	0	1	(s)	0	0	0	(s)	(s)
Malaysia	0	(s)	0	0	0	0	0	(s)	(s)	0	0	2	3	(s)
Mexico	0	398	5	29	(s)	0	0	(s)	(s)	0	0	(s)	1	(s)
Netherlands	0	1	0	0	0	215	12	151	(s)	4	0	6	623	21
Netherlands Antilles	0	(s)	0	0	0	205	143	3	(s)	18	(s)	165	830	28
New Zealand	0	0	0	0	371	0	0	(s)	0	303	0	(s)	576	19
Nicaragua	0	0	0	0	158	0	0	(s)	(s)	116	(s)	1	274	9
Nigeria	0	0	0	0	0	0	2	1	(s)	0	0	(s)	3	(s)
Norway	0	0	240	0	0	0	0	40	(s)	0	0	(s)	280	9
Pacific Trust Terr.	0	0	0	0	0	0	0	1	(s)	72	0	1	74	2
Panama	0	18	0	0	18	0	0	(s)	(s)	0	0	0	(s)	(s)
Peru	0	34	0	0	190	220	2	20	(s)	0	0	2	279	9
Philippines	0	0	0	0	0	0	0	9	(s)	0	0	17	250	8
Puerto Rico	0	0	0	0	0	0	0	2	(s)	0	0	0	4	(s)
Rep. of South Africa	1,149	32	(s)	0	0	(s)	(s)	16	(s)	0	0	1	1,207	40
Saudi Arabia	0	1	0	0	0	0	(s)	11	5	64	(s)	172	253	8
	0	0	0	0	0	0	(s)	43	0	0	0	6	50	2

See footnotes at end of table.

Table 19. Exports of Crude Oil and Petroleum Products by Destination, September 1983  
(Thousand Barrels)  
(continued)

Destination	Crude Oil <sup>1</sup>	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubricants	Waxes	Petroleum Coke	Asphalt	Other	Total	Total (Daily Average)
Singapore .....	0	3	0	0	0	125	4	4	(s)	0	(s)	(s)	135	5
Spain .....	0	0	0	0	203	0	0	8	(s)	633	0	65	908	30
Sumatra .....	0	0	0	0	0	0	(s)	(s)	0	15	0	(s)	16	1
Sweden .....	0	0	0	0	0	0	222	2	(s)	0	(s)	(s)	224	7
Switzerland .....	0	0	0	0	0	0	0	(s)	(s)	(s)	0	(s)	1	(s)
Thailand .....	0	0	0	0	0	0	0	1	(s)	0	0	1	2	(s)
Trinidad and Tobago .....	0	0	0	0	0	0	(s)	2	(s)	0	0	(s)	2	(s)
Turkey .....	0	0	0	0	(s)	0	0	0	0	0	0	0	(s)	(s)
United Arab Emirates .....	0	0	0	0	0	0	0	8	0	58	0	1	66	2
United Kingdom .....	0	5	0	0	0	0	0	5	(s)	111	(s)	23	144	5
U.S.S.R. ....	0	0	0	0	0	0	0	0	0	0	0	4	4	(s)
Uruguay .....	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Venezuela .....	0	(s)	0	0	0	0	0	(s)	(s)	88	0	1	94	3
Virgin Islands .....	3,089	1	0	0	0	0	3	0	0	0	0	(s)	3,809	127
West Germany .....	0	2	0	0	0	719	0	3	1	254	(s)	11	270	9
Yugoslavia .....	0	0	0	0	0	0	0	(s)	0	84	0	0	84	3
Other .....	552	118	0	0	0	0	0	42	(s)	7	(s)	32	750	25
Total .....	5,315	2,589	411	270	1,097	4,032	403	555	35	4,998	3	823	20,531	684

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with

Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical

Tracking Systems count these exchanges and shipments as imports and exports.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, September 1983  
(Thousand Barrels)

Commodity	PAD District I				PAD District II							PAD District III				PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mtn.	PAD Dist. V West Coast		
<b>Crude Oil (incl. lease condensate)</b>																		
Refinery	—	—	14,788	—	—	—	—	13,827	—	—	—	—	—	48,167	1,850	22,340	100,972	
Tank Farms and Pipelines	—	—	1,011	—	—	—	—	61,543	—	—	—	—	—	96,090	9,654	31,871	200,169	
Leases	—	—	59	—	—	—	—	1,586	—	—	—	—	—	17,286	1,317	1,657	21,905	
Strategic Petroleum Reserve <sup>1</sup>	—	—	0	—	—	—	—	0	—	—	—	—	—	361,000	0	0	361,000	
Alaskan In-Transit	—	—	0	—	—	—	—	0	—	—	—	—	—	—	—	—	—	
Total	—	—	15,858	—	—	—	—	76,956	—	—	—	—	—	522,543	12,821	84,455	712,633	
<b>Total Stocks, All Oils (excl. Crude Oil)</b>																		
Refinery	42,967	2,797	45,764	1,141	38,842	6,204	14,005	60,192	9,961	83,961	47,744	4,504	1,314	147,484	9,513	61,048	324,001	
Bulk Terminal	—	—	126,158	—	—	—	—	94,926	—	—	—	—	—	92,093	2,443	25,426	341,046	
Pipeline	—	—	27,745	—	—	—	—	33,576	—	—	—	—	—	40,102	2,395	4,246	108,064	
Natural Gas Processing Plant	214	43	257	0	192	40	1,351	1,583	1,954	1,276	750	75	170	4,225	180	160	6,405	
Total	—	—	199,924	—	—	—	—	190,277	—	—	—	—	—	283,904	14,531	90,880	779,516	
<b>Natural Gasoline and Isopentane</b>																		
Refinery	16	0	16	0	32	32	138	202	131	322	123	1	15	592	7	18	835	
Bulk Terminal	—	—	64	—	—	—	—	1,022	—	—	—	—	—	3,175	4	0	4,265	
Pipeline	—	—	0	—	—	—	—	329	—	—	—	—	—	594	21	5	949	
Natural Gas Processing Plant	3	9	12	0	19	10	149	178	328	179	162	25	26	720	33	16	959	
Total	—	—	92	—	—	—	—	1,731	—	—	—	—	—	5,081	65	39	7,008	
<b>Unfractionated Stream</b>																		
Bulk Terminal	—	—	0	—	—	—	—	2,217	—	—	—	—	—	1,784	0	0	4,001	
Pipeline	—	—	0	—	—	—	—	118	—	—	—	—	—	2,519	466	0	3,103	
Natural Gas Processing Plant	0	3	3	0	97	2	757	856	263	936	111	1	10	1,321	31	0	2,211	
Total	—	—	3	—	—	—	—	3,191	—	—	—	—	—	5,624	497	0	9,315	
<b>Plant Condensate</b>																		
Refinery	0	0	0	0	6	0	2	8	3	83	0	65	0	151	0	0	159	
Pipeline	—	—	0	—	—	—	—	0	—	—	—	—	—	204	0	0	204	
Natural Gas Processing Plant	0	0	0	0	1	3	3	7	31	16	10	8	0	65	15	0	87	
Total	—	—	0	—	—	—	—	15	—	—	—	—	—	420	15	0	450	
<b>Liquefied Petroleum Gases</b>																		
Refinery	609	9	618	422	1,706	97	635	2,860	276	4,556	2,403	39	23	7,297	330	587	11,692	
Bulk Terminal	—	—	2,139	—	—	—	—	29,061	—	—	—	—	—	58,184	96	2,783	92,263	
Pipeline	—	—	2,889	—	—	—	—	6,040	—	—	—	—	—	3,065	42	0	12,036	
Natural Gas Processing Plant	187	31	218	0	74	25	442	541	1,089	142	467	40	133	1,871	86	144	2,860	
Total	—	—	5,864	—	—	—	—	38,502	—	—	—	—	—	70,417	554	3,514	118,851	

See footnotes at end of table.

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, September 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	PAD Dist. IV Rocky Mt.		PAD Dist. V West Coast	
Ethane																		
Refinery .....	0	0	0	0	1	0	0	1	0	734	0	0	0	0	734	0	0	735
Bulk Terminal .....	—	—	0	—	—	—	—	1,166	—	—	—	—	—	—	2,899	0	0	4,065
Pipeline .....	—	—	0	—	—	—	—	776	—	—	—	—	—	—	277	0	0	1,053
Natural Gas Processing Plant .....	0	0	0	0	23	0	0	23	3	1	0	0	3	7	1	0	31	
Total .....	—	—	0	—	—	—	—	1,966	—	—	—	—	—	—	3,917	1	0	5,884
Propane for Petrochemical Feedstock Use																		
Refinery .....	18	0	18	0	78	0	0	78	2	5	0	0	0	0	7	0	0	103
Total .....	—	—	18	—	—	—	—	78	—	—	—	—	—	—	7	0	0	103
Propane For Other Uses																		
Refinery .....	547	6	553	1	1,165	13	202	1,381	62	1,826	870	4	4	2,566	140	99	4,739	
Bulk Terminal .....	—	—	1,780	—	—	—	—	18,246	—	—	—	—	—	28,300	96	673	49,095	
Pipeline .....	—	—	2,779	—	—	—	—	3,073	—	—	—	—	—	1,024	7	0	6,883	
Natural Gas Processing Plant .....	149	30	179	0	37	14	122	173	452	33	339	18	90	932	51	129	1,464	
Total .....	—	—	5,291	—	—	—	—	22,873	—	—	—	—	—	32,822	294	901	62,181	
Butane For Petro. Feed Use																		
Refinery .....	0	0	0	0	0	13	0	13	0	27	0	2	0	29	0	2	44	
Total .....	—	—	0	—	—	—	—	13	—	—	—	—	—	29	0	2	44	
Butane For Other Uses																		
Refinery .....	44	3	47	310	293	52	320	975	92	1,500	800	22	6	2,420	138	265	3,845	
Bulk Terminal .....	—	—	351	—	—	—	—	4,171	—	—	—	—	—	13,990	0	1,424	19,936	
Pipeline .....	—	—	110	—	—	—	—	1,071	—	—	—	—	—	394	0	0	1,575	
Natural Gas Processing Plant .....	37	1	38	0	10	9	61	80	297	57	84	16	25	479	33	11	641	
Total .....	—	—	546	—	—	—	—	6,297	—	—	—	—	—	17,283	171	1,700	25,997	
Butane-Propane Mixtures For Other Uses																		
Refinery .....	0	0	0	0	6	0	0	6	5	7	5	0	6	23	5	148	182	
Bulk Terminal .....	—	—	0	—	—	—	—	375	—	—	—	—	—	47	0	552	974	
Pipeline .....	—	—	0	—	—	—	—	18	—	—	—	—	—	632	0	0	650	
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	3	2	0	1	0	6	0	1	7	
Total .....	—	—	0	—	—	—	—	399	—	—	—	—	—	708	5	701	1,813	
Ethane-Propane Mixtures																		
Bulk Terminal .....	—	—	0	—	—	—	—	3,172	—	—	—	—	—	7,759	0	0	10,931	
Pipeline .....	—	—	0	—	—	—	—	619	—	—	—	—	—	647	35	0	1,301	
Natural Gas Processing Plant .....	0	0	0	0	0	0	240	240	266	0	0	0	10	276	0	0	516	
Total .....	—	—	0	—	—	—	—	4,031	—	—	—	—	—	8,682	35	0	12,748	

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, September 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II						PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mts.		PAD Dist. V	
																	West	Coast
<b>Isobutane</b>																		
Refinery	0	0	0	111	163	19	113	406	115	657	728	11	7	1,518	47	73	2,044	
Bulk Terminal	—	—	8	—	—	—	—	1,931	—	—	—	—	—	5,189	0	134	7,262	
Pipeline	—	—	0	—	—	—	—	483	—	—	—	—	—	91	0	0	574	
Natural Gas Processing Plant	1	0	1	0	4	2	19	25	68	49	44	5	5	171	1	3	201	
Total	—	—	9	—	—	—	—	2,845	—	—	—	—	—	6,969	48	210	10,081	
<b>Other Hydrocarbons and Alcohol</b>																		
Refinery	163	0	163	0	102	0	0	102	1	88	34	0	0	123	0	9	397	
Total	—	—	163	—	—	—	—	102	—	—	—	—	—	123	0	9	397	
<b>Unfinished Oils</b>																		
Refinery	3,460	187	3,647	48	2,344	200	874	3,466	826	8,925	5,733	174	87	15,745	529	4,862	28,249	
Naphtha and Lighter	2,402	31	2,433	0	2,194	3	463	2,660	757	7,390	1,473	30	6	9,656	490	3,546	18,785	
Kerosene and Lighter Gas Oils	6,631	273	6,904	120	4,205	304	1,210	5,839	823	11,978	7,281	306	82	20,470	923	9,871	44,007	
Heavy Gas Oils	2,395	286	2,681	2	2,820	9	1,257	4,088	543	4,933	3,313	58	0	8,847	533	5,455	21,604	
Residuum	14,888	777	15,665	170	11,563	516	3,804	16,053	2,949	33,226	17,800	568	175	54,718	2,475	23,734	112,645	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<b>Motor Gasoline Blending Components</b>																		
Refinery	5,221	100	5,321	41	4,892	735	1,483	7,161	1,605	8,370	7,066	140	172	17,353	1,580	7,337	38,752	
Bulk Terminal	—	—	86	—	—	—	—	253	—	—	—	—	—	505	1	306	1,151	
Pipeline	—	—	0	—	—	—	—	55	—	—	—	—	—	26	0	0	81	
Total	—	—	5,407	—	—	—	—	7,469	—	—	—	—	—	17,884	1,581	7,643	39,984	
<b>Aviation Gasoline Blending Components</b>																		
Refinery	7	0	7	0	78	0	42	120	0	10	148	0	0	158	0	40	325	
Total	—	—	7	—	—	—	—	120	—	—	—	—	—	158	0	40	325	
<b>Total Finished Motor Gasoline</b>																		
Refinery	5,372	215	5,587	84	6,042	1,537	2,972	10,635	2,133	8,235	4,774	661	182	15,985	1,738	7,644	41,589	
Bulk Terminal	—	—	39,178	—	—	—	—	32,205	—	—	—	—	—	11,855	1,403	11,680	96,321	
Pipeline	—	—	13,902	—	—	—	—	15,402	—	—	—	—	—	19,245	1,148	2,034	51,731	
Natural Gas Processing Plant	24	0	24	0	0	0	0	0	0	0	0	0	0	0	14	0	38	
Total	—	—	58,691	—	—	—	—	58,242	—	—	—	—	—	47,085	4,303	21,358	189,679	
<b>Finished Leaded Motor Gasoline</b>																		
Refinery	2,354	130	2,484	55	2,726	743	1,540	5,064	1,170	3,835	1,929	336	114	7,384	1,013	3,184	19,129	
Bulk Terminal	—	—	19,824	—	—	—	—	15,562	—	—	—	—	—	6,307	881	5,429	48,003	
Pipeline	—	—	7,716	—	—	—	—	8,264	—	—	—	—	—	9,797	743	936	27,456	
Natural Gas Processing Plant	12	0	12	0	0	0	0	0	0	0	0	0	0	0	10	0	22	
Total	—	—	30,036	—	—	—	—	28,890	—	—	—	—	—	23,488	2,647	9,549	94,610	

footnotes at end of table

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, September 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II							PAD District III				PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	Dist. IV		PAD Dist. V
Finished Unleaded Motor Gasoline																		
Refinery .....	3,018	85	3,103	29	3,316	794	1,432	5,571	963	4,400	2,845	325	68	8,601	725	4,460	22,460	
Bulk Terminal .....	—	—	19,354	—	—	—	—	16,643	—	—	—	—	—	5,548	522	6,251	48,318	
Pipeline .....	—	—	6,186	—	—	—	—	7,138	—	—	—	—	—	9,448	405	1,098	24,275	
Natural Gas Processing Plant .....	12	0	12	0	0	0	0	0	0	0	0	0	0	0	4	0	16	
Total .....	—	—	28,655	—	—	—	—	29,352	—	—	—	—	—	23,597	1,656	11,809	95,069	
Finished Aviation Gasoline																		
Refinery .....	32	0	32	0	123	0	29	152	106	394	144	0	0	644	31	245	1,104	
Bulk Terminal .....	—	—	418	—	—	—	—	443	—	—	—	—	—	111	6	322	1,300	
Pipeline .....	—	—	0	—	—	—	—	58	—	—	—	—	—	21	0	0	79	
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	60	0	0	0	0	60	0	0	60	
Total .....	—	—	450	—	—	—	—	653	—	—	—	—	—	836	37	567	2,543	
Naphtha-Type Jet Fuel																		
Refinery .....	182	31	213	0	414	42	211	667	306	876	432	147	174	1,935	233	974	4,022	
Bulk Terminal .....	—	—	268	—	—	—	—	538	—	—	—	—	—	123	4	555	1,488	
Pipeline .....	—	—	165	—	—	—	—	159	—	—	—	—	—	506	80	385	1,295	
Total .....	—	—	646	—	—	—	—	1,364	—	—	—	—	—	2,564	317	1,914	6,805	
Kerosene-Type Jet Fuel																		
Refinery .....	1,252	0	1,252	40	1,107	76	88	1,311	228	3,168	2,278	10	76	5,760	348	3,247	11,918	
Bulk Terminal .....	—	—	4,172	—	—	—	—	4,264	—	—	—	—	—	1,772	252	2,097	12,557	
Pipeline .....	—	—	3,553	—	—	—	—	1,936	—	—	—	—	—	4,086	114	821	10,510	
Total .....	—	—	8,977	—	—	—	—	7,511	—	—	—	—	—	11,618	714	6,165	34,985	
Kerosene																		
Refinery .....	387	75	462	0	472	55	393	920	48	1,140	665	26	103	1,982	4	319	3,687	
Bulk Terminal .....	—	—	2,758	—	—	—	—	1,021	—	—	—	—	—	870	26	65	4,740	
Pipeline .....	—	—	195	—	—	—	—	158	—	—	—	—	—	420	0	1	764	
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	2	0	0	0	1	3	0	0	3	
Total .....	—	—	3,405	—	—	—	—	2,099	—	—	—	—	—	3,275	30	385	9,194	
Distillate Fuel Oils																		
Refinery .....	7,671	308	7,980	93	6,937	1,476	2,858	11,364	993	11,534	4,648	958	187	18,320	1,554	5,137	44,355	
Bulk Terminal .....	—	—	52,512	—	—	—	—	18,558	—	—	—	—	—	7,121	607	4,646	83,444	
Pipeline .....	—	—	7,014	—	—	—	—	9,199	—	—	—	—	—	9,217	524	994	26,948	
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	
Total .....	—	—	67,506	—	—	—	—	39,121	—	—	—	—	—	34,659	2,685	10,777	154,748	
Residual Fuel Oils																		
Refinery .....	3,319	88	3,407	24	1,621	170	158	1,973	272	4,667	2,741	179	44	7,903	474	6,416	20,173	
Bulk Terminal .....	—	—	20,122	—	—	—	—	1,489	—	—	—	—	—	5,919	0	1,981	29,511	
Pipeline .....	—	—	0	—	—	—	—	0	—	—	—	—	—	1	0	6	7	
Total .....	—	—	23,529	—	—	—	—	3,462	—	—	—	—	—	13,823	474	8,403	49,691	

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, September 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I				PAD District II						PAD District III				PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	Dist. V West Coast		
<b>Naphtha &lt; 400 Deg. Petro. Feedstock</b>																		
Refinery	31	0	31	0	150	0	52	202	148	873	480	71	0	1,572	0	261	2,066	
Total	31	0	31	0	150	0	52	202	148	873	480	71	0	1,572	0	261	2,066	
<b>Other Oils &gt; 400 Deg. Petro. Feedstock</b>																		
Refinery	6	0	6	0	25	0	0	25	311	1,145	192	0	0	1,648	4	474	2,157	
Total	6	0	6	0	25	0	0	25	311	1,145	192	0	0	1,648	4	474	2,157	
<b>Special Naphthas</b>																		
Refinery	24	59	83	0	141	0	159	300	17	1,110	95	168	0	1,390	9	279	2,061	
Bulk Terminal	—	—	606	—	—	—	—	250	—	—	—	—	—	90	0	48	994	
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	110	0	0	0	0	110	0	0	110	
Total	—	—	689	—	—	—	—	550	—	—	—	—	—	1,590	9	327	3,165	
<b>Lubricants</b>																		
Refinery	1,030	914	1,944	0	635	0	264	899	19	2,957	1,043	487	0	4,506	47	536	7,932	
Bulk Terminal	—	—	1,065	—	—	—	—	1,024	—	—	—	—	—	241	5	687	3,022	
Total	—	—	3,009	—	—	—	—	1,923	—	—	—	—	—	4,747	52	1,223	10,954	
<b>Waxes</b>																		
Refinery	15	140	155	0	43	0	30	73	24	232	119	89	0	464	0	54	746	
Total	—	—	155	—	—	—	—	73	—	—	—	—	—	464	0	54	746	
<b>Petroleum Coke</b>																		
Refinery	917	0	917	0	522	72	129	723	4	82	713	152	0	951	148	2,091	4,830	
Total	917	0	917	0	522	72	129	723	4	82	713	152	0	951	148	2,091	4,830	
<b>Asphalt and Road Oil</b>																		
Refinery	1,558	44	1,602	266	2,180	1,388	538	4,372	356	533	1,631	676	163	3,359	527	1,474	11,334	
Bulk Terminal	—	—	2,717	—	—	—	—	2,545	—	—	—	—	—	306	39	177	5,784	
Total	—	—	4,319	—	—	—	—	6,917	—	—	—	—	—	3,665	566	1,651	17,118	
<b>Miscellaneous Products</b>																		
Refinery	267	36	303	1	51	8	10	70	31	360	215	67	0	673	4	172	1,222	
Bulk Terminal	—	—	53	—	—	—	—	36	—	—	—	—	—	37	0	79	205	
Pipeline	—	—	37	—	—	—	—	122	—	—	—	—	—	198	0	0	357	
Natural Gas Processing Plant	0	0	0	0	1	0	0	1	70	3	0	1	0	74	1	0	76	
Total	—	—	393	—	—	—	—	229	—	—	—	—	—	982	5	251	1,860	
<b>Total Stocks, All Oils</b>	—	—	215,782	—	—	—	—	267,233	—	—	—	—	—	808,447	27,352	175,335	1,492,149	

1 Includes 33,879 thousand barrels of domestic crude oil.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 21. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, September 1983  
(Thousand Barrels)

Commodity	From I to			From II to				From III to				From IV to			From V to		
	II	III	V	I	III	IV	V	I	II	IV	V	II	III	V	I	II	IV
<b>Crude Oil (Tanker and Barge only)</b>	0	0	0	0	0	0	0	422	1,147	0	0	0	0	0	4,419	0	15,952
<b>Petroleum Products</b>	7,983	339	0	3,320	5,948	2,231	694	76,440	27,784	0	1,755	1,934	389	959	0	0	0
Natural Gasoline and Isopentane	0	0	0	0	0	0	0	0	371	0	0	5	0	0	0	0	65
Unfractionated Stream	0	0	0	0	512	0	0	0	1,105	0	0	698	389	0	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	0	0	0	712	2,475	139	0	1,599	4,533	0	0	274	0	0	0	0	0
Unfinished Oils	55	195	0	0	0	0	133	287	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	0	989	0	0	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	5,334	0	0	1,287	1,939	1,394	0	45,924	11,660	0	585	559	0	667	0	0	0
Finished Leaded Motor Gasoline	2,852	0	0	519	1,014	805	0	18,212	5,591	0	304	369	0	458	0	0	0
Finished Unleaded Motor Gasoline	2,482	0	0	768	925	589	0	27,712	6,069	0	281	190	0	209	0	0	0
Finished Aviation Gasoline	9	0	0	11	0	25	0	201	212	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel	83	0	0	0	128	0	0	591	103	0	288	73	0	19	0	0	0
Kerosene-Type Jet Fuel	243	0	0	209	64	463	0	8,370	1,842	0	157	4	0	21	0	0	0
Kerosene	50	0	0	0	0	0	0	333	21	0	0	0	0	0	0	0	0
Distillate Fuel Oil	2,155	0	0	521	596	210	0	15,504	5,655	0	312	321	0	252	0	0	0
Residual Fuel Oil	0	0	0	124	75	0	561	2,225	17	0	375	0	0	0	0	0	0
Naphtha and Other Oils for Petro.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feedstock	18	0	0	18	0	0	0	187	13	0	0	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	0	0	116	114	0	0	0	0	0	0	0	0
Lubricants	0	59	0	49	9	0	0	623	323	0	38	0	0	0	0	0	28
Waxes	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	204	0	0	0	241	812	0	0	0	0	0	0	0	0
Miscellaneous Products	36	85	0	185	55	0	0	232	14	0	0	0	0	0	0	0	37
<b>Total All Products</b>	7,983	339	0	3,320	5,948	2,231	694	76,962	28,931	0	1,755	1,934	389	959	4,419	0	16,017

Sources: See Explanatory Notes on Data Collection and Estimation.



Table 22. Movements of Petroleum Products by Pipeline between PAD Districts, September 1983  
(Thousand Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	I	I	III	IV	I	II	IV	V	II	III	V	III	IV
Natural Gasoline and Isopentane .....	0	0	0	0	95	0	0	0	371	0	0	0	0	0	0
Unfractionated Stream .....	0	0	0	0	512	0	0	0	1,105	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components .....	0	0	712	2,475	139	1,526	4,533	0	0	0	0	0	0	0	0
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	3,909	0	1,122	1,915	0	1,394	35,216	10,527	0	585	559	0	667	0	0
Finished Unleaded Motor Gasoline .....	2,058	0	448	1,014	805	14,297	5,066	0	0	304	389	0	458	0	0
Finished Aviation Gasoline .....	1,851	0	674	901	589	20,919	5,461	0	0	281	190	0	209	0	0
Naphtha-Type Jet Fuel .....	9	0	0	0	0	25	39	169	0	0	0	0	0	0	0
Kerosene-Type Jet Fuel .....	0	0	0	0	128	0	292	103	0	288	73	0	19	0	0
Kerosene .....	96	0	204	64	463	5,255	1,630	0	157	4	21	0	0	0	0
Distillate Fuel Oil .....	40	0	0	0	0	0	263	21	0	0	0	0	0	0	0
Residual Fuel Oil .....	1,482	0	479	596	210	13,183	5,170	0	0	312	321	0	252	0	0
Miscellaneous Products .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	5,536	0	2,692	5,785	2,231	55,784	24,534	0	1,342	1,934	389	959	0	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

Table 23. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, September 1983  
(Thousand Barrels)

Commodity	From I to			From II to			From III to					From V to			
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	V	I	II	III
Crude Oil .....	0	0	0	0	0	0	422	0	422	0	1,147	0	4,419	0	15,952
Petroleum Products .....	2,447	339	0	628	163	694	20,656	1,172	3,327	16,157	3,250	413	0	0	65
Liquefied Petroleum Gases .....	0	0	0	0	0	0	73	0	0	73	0	0	0	0	0
Unfinished Oils .....	55	195	0	0	0	133	287	0	287	0	0	0	0	0	0
Motor Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0
Finished Motor Gasoline .....	1,425	0	0	165	24	0	10,708	372	1,203	9,133	1,133	0	0	0	0
Finished Aviation Gasoline .....	0	0	0	11	0	0	162	10	61	91	43	0	0	0	0
Naphtha-Type Jet Fuel .....	83	0	0	0	0	0	299	10	129	160	0	0	0	0	0
Kerosene-Type Jet Fuel .....	147	0	0	5	0	0	3,115	233	470	2,412	212	0	0	0	0
Kerosene .....	10	0	0	0	0	0	70	0	56	14	0	0	0	0	0
Distillate Fuel Oil .....	673	0	0	42	0	0	2,311	489	104	1,718	485	0	0	0	0
Residual Fuel Oil .....	0	0	0	124	75	561	2,225	58	171	1,996	17	375	0	0	0
Naphtha and Other Oils for Petro. Feed. Use .....	18	0	0	18	0	0	187	0	78	109	13	0	0	0	0
Special Naphthas .....	0	0	0	0	0	0	116	0	98	18	114	0	0	0	0
Lubricants .....	0	59	0	49	9	0	623	0	439	184	323	36	0	0	28
Waxes .....	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0
Asphalt and Road Oil .....	0	0	0	204	0	0	241	0	9	232	812	0	0	0	0
Miscellaneous Products .....	36	85	0	10	55	0	232	0	215	17	14	0	0	0	37
Total .....	2,447	339	0	628	163	694	21,078	1,172	3,749	16,157	4,397	413	4,419	0	16,017

Source: See Explanatory Notes on Data Collection and Estimation.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 24. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, September 1983  
(Thousand Barrels)

Commodity	P.A.D. District I			P.A.D. District II			P.A.D. District III			P.A.D. District IV			P.A.D. District V		
	Receipts into PADD I	Ship-ments from PADD I	Net Receipts PADD I	Receipts into PADD II	Ship-ments from PADD II	Net Receipts PADD II	Receipts into PADD III	Ship-ments from PADD III	Net Receipts PADD III	Receipts into PADD IV	Ship-ments from PADD IV	Net Receipts PADD IV	Receipts into PADD V	Ship-ments from PADD V	Net Receipts PADD V
<b>Crude Oil (Tanker and Barge only)</b>	4,841	0	4,841	1,147	0	1,147	15,952	1,569	14,383	0	0	0	0	20,371	-20,371
<b>Petroleum Products</b>	79,760	8,322	71,438	37,701	12,193	25,508	6,741	105,979	-99,238	2,231	3,282	-1,051	3,408	65	3,343
Natural Gasoline	0	0	0	376	95	281	95	371	-276	0	5	-5	0	0	0
Unfractionated Stream	0	0	0	1,803	512	1,291	901	1,105	-204	0	1,087	-1,087	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	2,311	0	2,311	4,807	3,326	1,481	2,475	6,132	-3,657	139	274	-135	0	0	0
Unfinished Oils	287	250	37	55	133	-78	195	287	-92	0	0	0	133	0	133
Motor Gasoline Blending Components	0	0	0	989	0	989	0	989	-989	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	47,211	5,334	41,877	17,553	4,620	12,933	1,939	58,169	-56,230	1,394	1,226	168	1,252	0	1,252
Finished Leaded Motor Gasoline	18,731	2,852	15,879	8,812	2,338	6,474	1,014	24,107	-23,093	805	827	-22	762	0	762
Finished Unleaded Motor Gasoline	28,480	2,482	25,998	8,741	2,282	6,459	925	34,062	-33,137	589	399	190	490	0	490
Finished Aviation Gasoline	212	9	203	221	36	185	0	413	-413	25	0	25	0	0	0
Naphtha-Type Jet Fuel	591	83	508	259	128	131	128	982	-854	0	92	-92	307	0	307
Kerosene-Type Jet Fuel	8,579	243	8,336	2,089	736	1,353	64	10,368	-10,305	463	25	438	178	0	178
Kerosene	333	50	283	71	0	71	596	354	-354	0	0	0	0	0	0
Distillate Fuel Oil	16,025	2,155	13,870	8,131	1,327	6,804	596	21,471	-20,875	210	573	-363	564	0	564
Residual Fuel Oil	2,349	0	2,349	17	760	-743	75	2,617	-2,542	0	0	0	936	0	936
Naphtha and Other Oils for Petro.															
Feedstock Use	205	18	187	31	18	13	0	200	-200	0	0	0	0	0	0
Special Naphthas	116	0	116	114	0	114	0	230	-230	0	0	0	0	0	0
Lubricants	672	59	613	323	58	265	96	984	-888	0	0	0	38	28	10
Waxes	7	0	7	0	0	0	0	7	-7	0	0	0	0	0	0
Asphalt and Road Oil	445	0	445	812	204	608	0	1,053	-1,053	0	0	0	0	0	0
Miscellaneous Products	417	121	296	50	240	-190	177	246	-69	0	0	0	0	37	-37
<b>Total All Products</b>	84,601	8,322	76,279	38,848	12,193	26,655	22,693	107,548	-84,855	2,231	3,282	-1,051	3,408	20,436	-17,028

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 25. Production of Residual Fuel Oil By Sulfur Content, September 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.		Dist. V West Coast
Residual Fuel Oil .....	2,379	41	2,420	80	1,300	176	270	1,826	635	7,619	2,494	287	47	11,082	345	8,775	24,448
0.00 to 0.30% Sulfur .....	668	37	705	0	123	0	102	225	66	240	221	84	7	618	56	553	2,257
0.31 to 1.00% Sulfur .....	1,515	0	1,515	-25	334	0	84	393	449	1,464	812	151	0	2,876	113	3,079	7,976
Greater Than 1.00% Sulfur .....	196	4	200	105	843	176	84	1,208	120	5,915	1,461	52	40	7,588	176	5,043	14,215

Source: See Explanatory Notes on Data Collection and Estimation.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 26. Stocks of Residual Fuel Oil By Sulfur Content, September 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	PAD Dist. IV Rocky Mt.		PAD Dist. V West Coast
<b>Residual Fuel Oil - 0.00 to 0.30% Sulfur</b>																	
Refinery .....	527	36	563	0	148	0	52	200	40	143	104	19	9	315	133	537	1,748
Bulk Terminal .....	—	—	4,480	—	—	—	—	89	—	—	—	—	—	242	0	107	4,918
Total .....	—	—	5,043	—	—	—	—	289	—	—	—	—	—	557	133	644	6,666
<b>Residual Fuel Oil - 0.31 to 1.00% Sulfur</b>																	
Refinery .....	1,736	3	1,739	24	479	0	67	570	155	1,038	1,027	69	0	2,289	115	2,130	6,843
Bulk Terminal .....	—	—	6,530	—	—	—	—	616	—	—	—	—	—	3,424	0	341	10,911
Total .....	—	—	8,269	—	—	—	—	1,186	—	—	—	—	—	5,713	115	2,471	17,754
<b>Residual Fuel Oil - Greater than 1.00% Sulfur</b>																	
Refinery .....	1,056	49	1,105	0	994	170	39	1,203	77	3,486	1,610	91	35	5,299	226	3,749	11,582
Bulk Terminal .....	—	—	9,112	—	—	—	—	784	—	—	—	—	—	2,253	0	1,533	13,662
Total .....	—	—	10,217	—	—	—	—	1,987	—	—	—	—	—	7,552	226	5,282	25,264

Sources: See Explanatory Notes on Data Collection and Estimation.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable

Table 27. Movements of Residual Fuel Oil by Tanker and Barge Between PAD Districts, By Sulfur Content, September 1983  
(Thousand Barrels)

Commodity	From I to		From II to				From III to				From V to			
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	I	V	III
Residual Fuel Oil	0	0	0	124	75	561	2,225	58	171	1,996	17	375	0	0
0.00 to 0.30% Sulfur	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.31 to 1.00% Sulfur	0	0	0	5	0	561	606	0	0	606	0	0	0	0
Greater Than 1.00% Sulfur	0	0	0	119	75	0	1,619	58	171	1,390	17	0	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 28. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, September 1983**  
(Thousand Barrels)

Country	Residual Fuel Oil			
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	Total
<b>Arab OPEC</b>				
Algeria .....	833	1,094	0	1,927
Iraq .....	0	0	0	0
Kuwait .....	0	0	521	521
Libya .....	0	0	0	0
Qatar .....	0	0	0	0
Saudi Arabia .....	0	0	620	620
United Arab Emirates .....	0	0	0	0
Subtotal Arab OPEC .....	833	1,094	1,141	3,069
<b>Other OPEC</b>				
Ecuador .....	0	0	186	186
Gabon .....	0	0	0	0
Indonesia .....	373	0	0	373
Iran .....	0	0	0	0
Nigeria .....	0	0	7	7
Venezuela .....	497	0	2,428	2,925
Subtotal Other OPEC .....	871	0	2,621	3,491
<b>Other</b>				
Angola .....	0	257	0	257
Australia .....	0	0	0	0
Bahamas .....	403	100	150	653
Bolivia .....	0	0	0	0
Brazil .....	292	200	0	492
Brunel .....	0	0	0	0
Canada .....	264	138	288	690
Congo .....	167	177	0	344
Egypt .....	0	0	0	0
France .....	0	0	0	0
Ghana .....	0	0	0	0
Liberia .....	200	0	0	200
Malaysia .....	0	0	2	2
Mexico .....	12	0	7	19
Netherlands .....	0	0	0	0
Netherlands Antilles .....	0	0	4,557	4,557
Norway .....	0	0	0	0
Oman .....	0	0	0	0
People's Republic of China .....	0	0	0	0
Peru .....	0	0	523	523
Puerto Rico .....	0	0	0	0
Romania .....	0	0	0	0
Spain .....	0	0	64	64
Syria .....	0	0	0	0
Trinidad .....	(a)	0	0	(a)
Tunisia .....	0	0	0	0
United Kingdom .....	0	323	0	323
Virgin Islands .....	179	2,241	1,148	3,567
Yugoslavia .....	0	0	0	0
Zaire .....	0	0	0	0
Other Western Hemisphere .....	537	0	471	1,008
Other Eastern Hemisphere .....	544	599	296	1,440
Subtotal Other .....	2,598	4,035	7,505	14,138
<b>Total Imports .....</b>	<b>4,301</b>	<b>5,129</b>	<b>11,267</b>	<b>20,698</b>

(a) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.  
Sources: See Explanatory Notes on Data Collection and Estimation.

Table 29. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, September 1983  
(Thousand Barrels)

State	Residual Fuel Oil			
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	Total
<b>PAD District I</b>	<b>3,734</b>	<b>4,739</b>	<b>9,395</b>	<b>17,868</b>
Florida	0	929	1,120	2,049
Georgia	0	0	224	224
Maine	0	155	833	988
Maryland	53	311	279	642
Massachusetts	0	323	599	922
New Hampshire	(s)	0	151	151
New Jersey	955	936	1,074	2,965
New York	2,661	1,756	3,329	7,747
North Carolina	(s)	0	206	207
Pennsylvania	59	0	105	164
Rhode Island	0	0	47	47
South Carolina	0	0	311	311
Vermont	6	0	0	6
Virginia	0	329	1,116	1,446
<b>PAD District II</b>	<b>183</b>	<b>45</b>	<b>70</b>	<b>299</b>
Illinois	52	0	0	52
Michigan	55	45	0	100
Minnesota	4	0	23	28
North Dakota	1	0	32	33
Ohio	70	0	15	85
<b>PAD District III</b>	<b>11</b>	<b>345</b>	<b>1,306</b>	<b>1,663</b>
Louisiana	(s)	0	10	10
Texas	11	345	1,296	1,653
<b>PAD District IV</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>31</b>
Montana	0	0	31	31
<b>PAD District V</b>	<b>374</b>	<b>0</b>	<b>464</b>	<b>838</b>
California	0	0	392	392
Hawaii	(s)	0	67	67
Washington	373	0	5	378
<b>All PAD Districts</b>	<b>4,301</b>	<b>5,129</b>	<b>11,267</b>	<b>20,698</b>

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.  
Sources: See Explanatory Notes on Data Collection and Estimation.

# Glossary





# Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group;  $\text{CH}-(\text{CH})_n-\text{OH}$ . *Alcohol* includes methanol and ethanol.

**Alkylation.** A refinery process for chemically combining isoparaffin with olefin hydrocarbons. The product, alkylate, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

**API Gravity.** An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it may be calculated in terms of the following formula:

$$\text{Deg API} = \frac{141.5}{\text{sp gr } 60\text{F}/60\text{F}} - 131.5$$

**Aromatics.** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene.

**Asphalt.** A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels of 42 U.S. gallons per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline, Finished.** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

**Barrels per Calendar Day.** The maximum number of barrels of input that can be processed in a twenty-four hour period after making allowances for the following limitations: downstream limitations, environmental constraints, types and grades of inputs, planned and unplanned downtime, and types and grades of products.

**Barrels Per Stream Day.** The amount a unit can process running at full capacity under optimal crude and product slate conditions.

**Bi-metallic.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of two metals (e.g., platinum, rhenium).

**Butane.** A normally gaseous paraffinic hydrocarbon,  $\text{C}_4\text{H}_{10}$ . It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

**Isobutane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 10.9 degrees F. This classification includes mixtures of gases that contain 80 percent liquid volume or more isobutane. It is extracted from natural gas and refinery gas streams.

**Normal Butane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 31.1 degrees F. This classification includes mixtures of gases that contain 80 percent or more normal butane.

**Other Butanes.** All butanes not included as normal butane or isobutane.

**Butane-Propane Mixtures.** Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane mixtures. They are extracted from natural gas and refinery gas streams.

**Butylene.** An olefinic hydrocarbon,  $\text{C}_4\text{H}_8$ , recovered from refinery processes.

**Catalytic Cracking.** The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil.

**Catalytic Hydrocracking.** A refining process for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel and/or high grade fuel oil. Hydrocracking is an efficient, relatively low temperature process using hydrogen and a catalyst.

**Catalytic Hydrotreating.** A process for treating petroleum fractions (e.g., distillate fuel oil and residual fuel oil) and unfinished oils (e.g., naphthas, reformer feeds and heavy gas oil) in the presence of catalysts and substantial quantities of hydrogen to upgrade their quality.

**Catalytic Reforming.** The use of controlled heat and pressure with catalysts to effect the rearrangement of certain hydrocarbon molecules without altering their composition appreciably; the conversion of low-octane



gasoline fractions into higher octane stocks suitable for blending into finished gasoline; also the conversion of naphthas to obtain a more volatile product of higher octane number.

**Conventional.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of a metal and a non-metal (e.g., platinum, alumina).

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite coal which conform to ASTM Specification D388.

**Crude Distillation.** The refining process of separating crude oil components by heating and subsequent condensing of the fractions by cooling.

**Crude Oil** (including Lease Condensate). A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite and oil shale. Drip gas is also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign according to the following:

**Domestic.** Crude oil produced in the United States or from its outer continental shelf as defined in 43 U.S.C. 1331.

**Foreign.** Crude oil produced outside the United States.

**Delayed Coking.** A process to produce low Conradson carbon gas for catalytic cracking feedstock and for gasoline.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuel.

**No. 1 Fuel Oil.** A light distillate fuel oil intended for use in vaporizing pot-type burners. ASTM Specification D396 specifies for this grade maximum distillation temperatures of 420 degrees F. at the 10-percent point and 550 degrees F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100 degrees F.

**No. 2 Fuel Oil.** A distillate fuel oil for use in atomizing-type burners for domestic heating or for moderate capacity commercial-industrial burner units. ASTM

Specification D396 specifies for this grade distillation temperatures at the 90-percent point between 540 degrees and 640 degrees F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100 degrees F.

**No. 1 and No. 2 Diesel Fuel Oils.** Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D975:

**No. 1-D.** A volatile distillate fuel oil with a boiling range between 300-575 degrees F. and used in high-speed diesel engines generally operated under wide variations in speed and load. Includes type C-B diesel fuel used for city buses and similar operations. Properties are defined in ASTM Specifications D975.

**No. 2-D.** A gas oil type distillate of lower volatility with distillation temperatures at the 90-percent point between 540-640 degrees F. for use in high-speed diesel engines generally operated under uniform speed and load conditions. Includes Type R-R diesel fuel used for railroad locomotive engines, and Type T-T for diesel-engine trucks. Properties are defined in ASTM Specification D975.

**No. 4 Fuel Oil.** A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100 degrees F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous paraffinic compound (C<sub>2</sub>H<sub>6</sub>) extracted from natural gas and refinery gas streams. "Ethane" includes any products containing 90 percent liquid volume or more ethane.

**Ethane-Propane Mixtures.** Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon, (C<sub>2</sub>H<sub>4</sub>) recovered from refinery or petrochemical processes.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Fluid Coking:** A thermal process utilizing the fluidized-solids technique for continuous conversion of heavy, low-grade oils into lighter products.

**Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation or motor gasoline.

**Gas Oil.** A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. Derives its name from having originally been used in the manufacture of illuminating gas. Now supplies distillate-type fuel oils and diesel fuel, also cracked to produce gasoline.

**Imported Crude Oil Burned as Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. *Imported crude oil burned as fuel* includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

**Isomerization.** A refining process which alters the fundamental arrangement of atoms in the molecule. Used to convert normal butane into isobutane, an alkylation process feedstock, and normal pentane and hexane into isopentane and isohexane, high-octane gasoline components.

**Kerosene.** A petroleum distillate that boils at a temperature between 300-550 degrees F., that has a flash point higher than 100 degrees F. by ASTM Method D56, that has a gravity range from 40-46 degrees API, and that has a burning point in the range of 150-175 degrees F. Included are the two classifications recognized by ASTM D-3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil which have properties similar to No. 1 fuel oil, but with a gravity of about 43 degrees API and a maximum end-point of 625 degrees F. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7 degrees API, a 10 percent distillation temperature of 400 degrees F. It is covered by ASTM Specification D1655 and Military Specifications MIL-T-5624L (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type; it is used primarily for commercial turbojet and turbo-prop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Liquefied Petroleum Gases (LPG).** Propane, propylene, butanes, butylene, butane-propane mixtures, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propane mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as a petrochemical feedstock and also excludes liquefied gases ready for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstocks or other uses.

**Lubricating Oils.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. *Lubricants* includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories include Bright Stock, Neutral, and Other.

**Bright Stock.** A refined, high viscosity lubricating oil base stock that is usually made from residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.

**Neutral.** A distillate lubricating oil base stock with a viscosity that is usually not above 550 Saybolt Universal Seconds (SUS) at 100 degrees F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.

**Other.** A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Middle Distillates.** A general classification that includes distillate fuel oil and kerosene.

**Miscellaneous Products.** Includes all finished products not classified elsewhere, e.g., petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, speciality oils and medicinal oils.

**Motor Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline, Finished.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines. Specifications for motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, include a boiling range of 122 degrees to 158 degrees F. at the 10-percent point to 365 degrees to 374 degrees F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. *Motor gasoline* includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Leaded Gasoline.** Contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Unleaded Gasoline.** Contains not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blend stock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Gasohol.** A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) in which 10 percent or more of the product is alcohol.

**Motor Gasoline, Total.** Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished

motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gasoline and Isopentane.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, C<sub>5</sub>H<sub>12</sub>, obtained by fractionation of natural gasoline or isomerization of normal pentane.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Distillation Capacity.** The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtimes, and environmental constraints. Includes any shutdown capacity that could be placed in operation within 90 days.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Petrochemical Feedstock Use.** Chemical feedstocks derived from petroleum, principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The categories reported are *Naphtha-less than 400 degrees F. end-point* and *Other oils-over 400 degrees F. end-point*.

**Naphtha-Less Than 400 Degrees F. End-Point.** A naphtha with an end point of less than 400 degrees F. that is reported as used as a petrochemical feedstock.

**Other Oils-Over 400 Degrees F. End-Point.** Oils with an end point over 400 degrees F. that is reported as used as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is five barrels of 42 U.S. gallons per short ton.

**Marketable Coke.** Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This *green* coke may be sold or further purified by calcining.

**Catalyst Coke.** In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, liquefied petroleum gases, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils-over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. *Primary Stocks* excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous paraffinic compound, C<sub>3</sub>H<sub>8</sub>, which includes all products covered by NGPA Specification for commercial and HD-5 propane and ASTM Specification D1835. It is used primarily as a fuel and as a petrochemical feedstock.

**Propylene.** An olefinic hydrocarbon, C<sub>3</sub>H<sub>6</sub>, recovered from refinery or petrochemical processes.

**Residual Fuel Oil.** The topped crude of refinery operation which includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D396 and Federal Specification VV-F-815C, Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2 (NATO Symbol F-77), and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Includes imported crude oil to be burned as a fuel.

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in

six grades from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point and have a boiling range of 90 degrees to 220 degrees F. *Special naphthas* includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and/or refinery fuel use.

**Petrochemical Feedstock Use.** Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc., are considered petrochemical products; therefore, only their feed-stock equivalents are included.

**Fuel Use.** All other still gas.

**Strategic Petroleum Reserve (SPR).** Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

**Thermal Cracking.** A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking is used to increase the yield of gasoline obtainable from crude oil.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Streams.** Mixtures of unsegregated natural gas liquid components excluding those included in plant condensate. This product is extracted from natural gas.

**Vacuum Distillation.** Distillation under reduced pressure (less the atmospheric) which lowers the boiling temperature of the liquid being distilled. This technique, with its relatively low temperatures, prevents cracking or decomposition of the charge stock.

**Visbreaking.** A thermal cracking process in which heavy vacuum-still bottoms produced on the primary

distillation unit are cracked to increase production of distillate products.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42-gallon barrel.

**Microcrystalline Wax.** Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

Penetration at 77 degrees F. (D-1321)-60 maximum.  
Viscosity at 210 degrees F. in Saybolt Universal Sec-

onds (SUS) (D-88)-60 SUS (10.22 centistokes) minimum to 150 SUS (31.8 centistokes) maximum. Oil content (D-721)-5 percent minimum.

**Crystalline-Fully Refined Wax.** A light-colored paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.5 percent maximum. Other + 20 color, Saybolt minimum.

**Crystalline-Other Wax.** A paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and the surrounding waters.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

*The following are the Bureau of Mines petroleum refining districts which make up the PAD districts:*

## PAD District I

**East Coast:** District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1:** The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

## PAD District II

**Appalachian #2:** The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

**Indiana—Illinois—Kentucky:** The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota:** The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri:** The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

## PAD District III

**Texas Inland:** The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast:** The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

**Louisiana Gulf Coast:** The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas:** The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico:** The State of New Mexico.

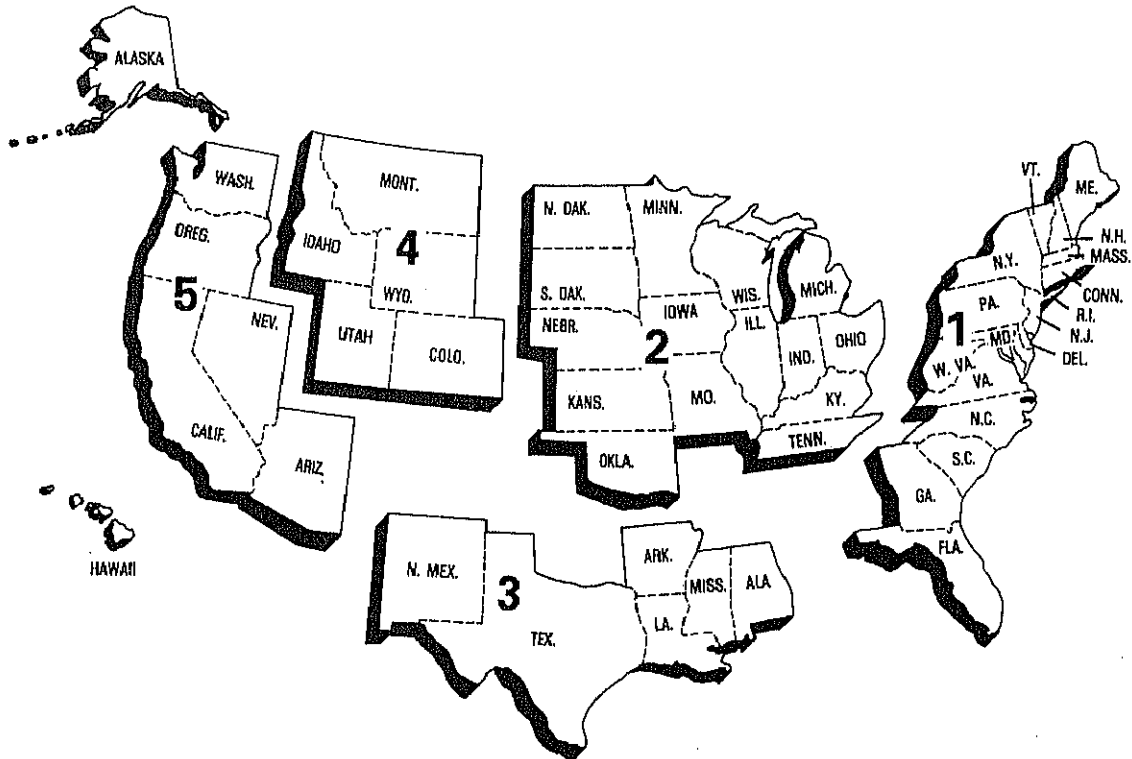
## PAD District IV

**Rocky Mountain:** The States of Montana, Idaho, Wyoming, Utah, and Colorado.

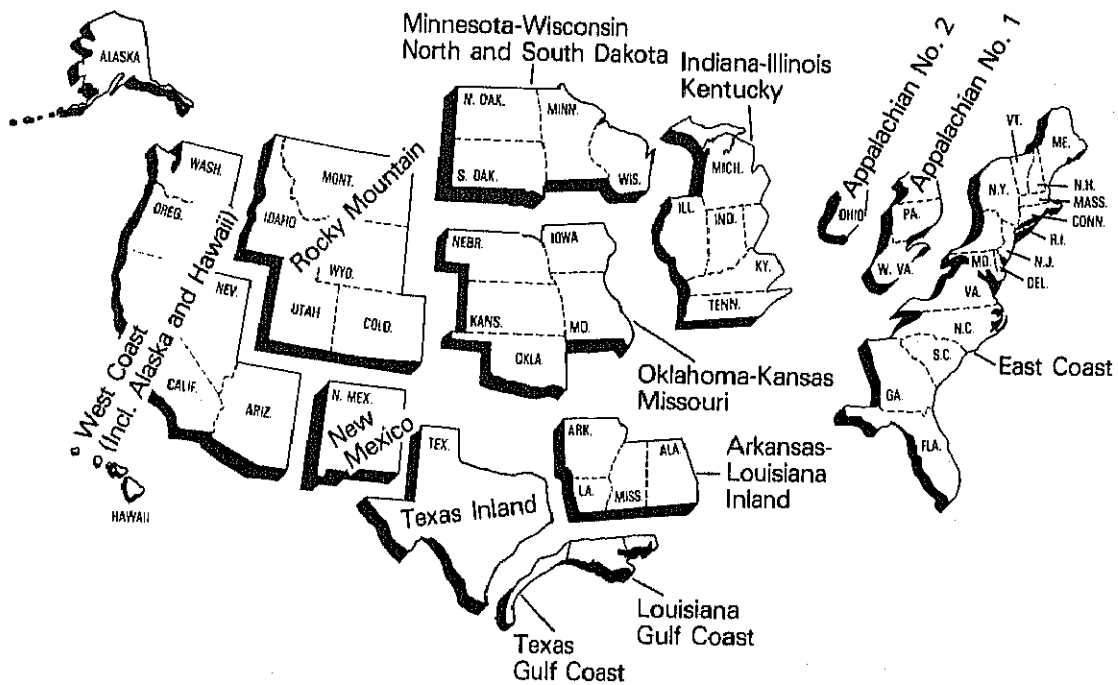
## PAD District V

**West Coast:** The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

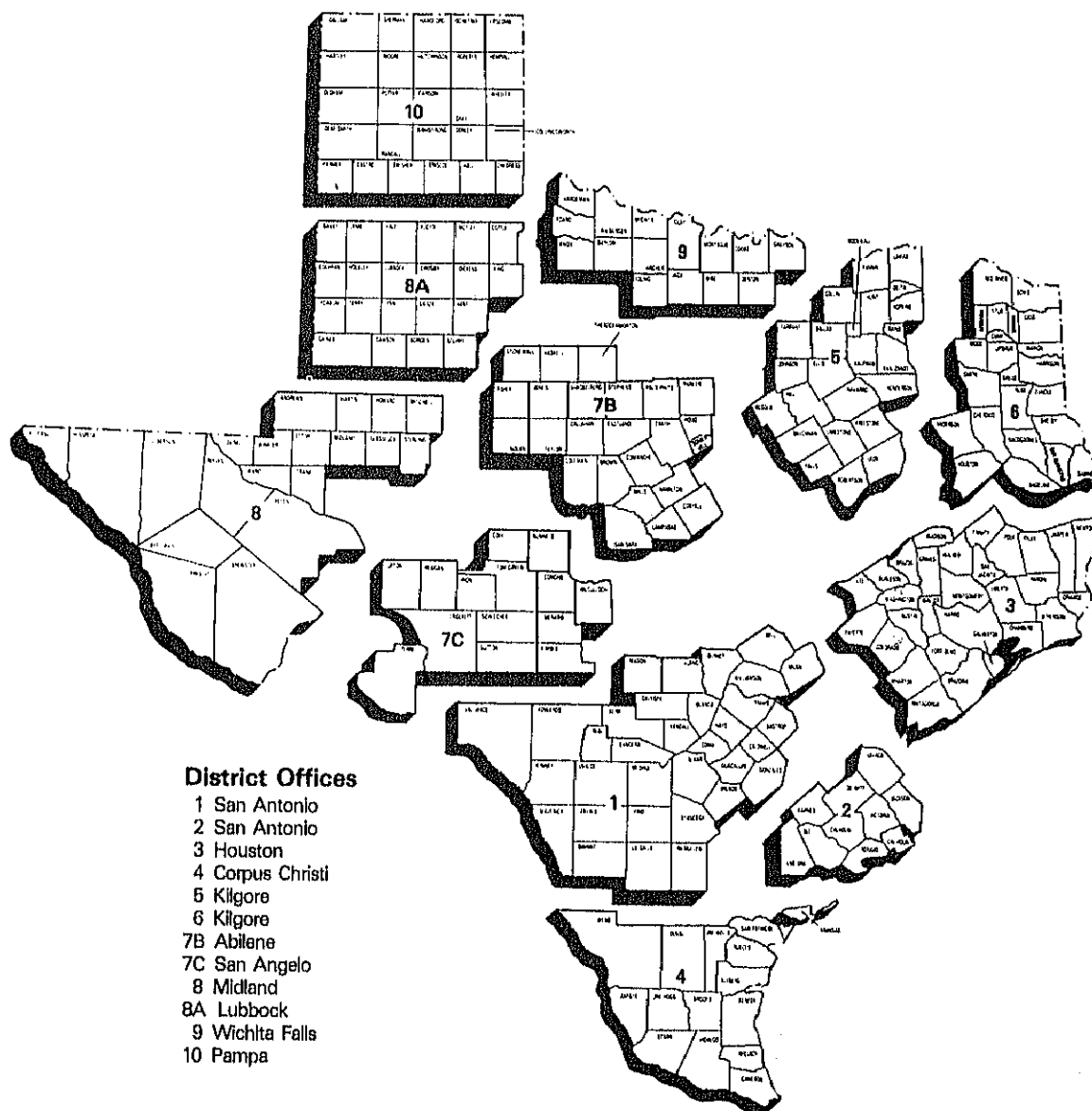
## Petroleum Administration for Defense (PAD) Districts



## Bureau of Mines Refining Districts



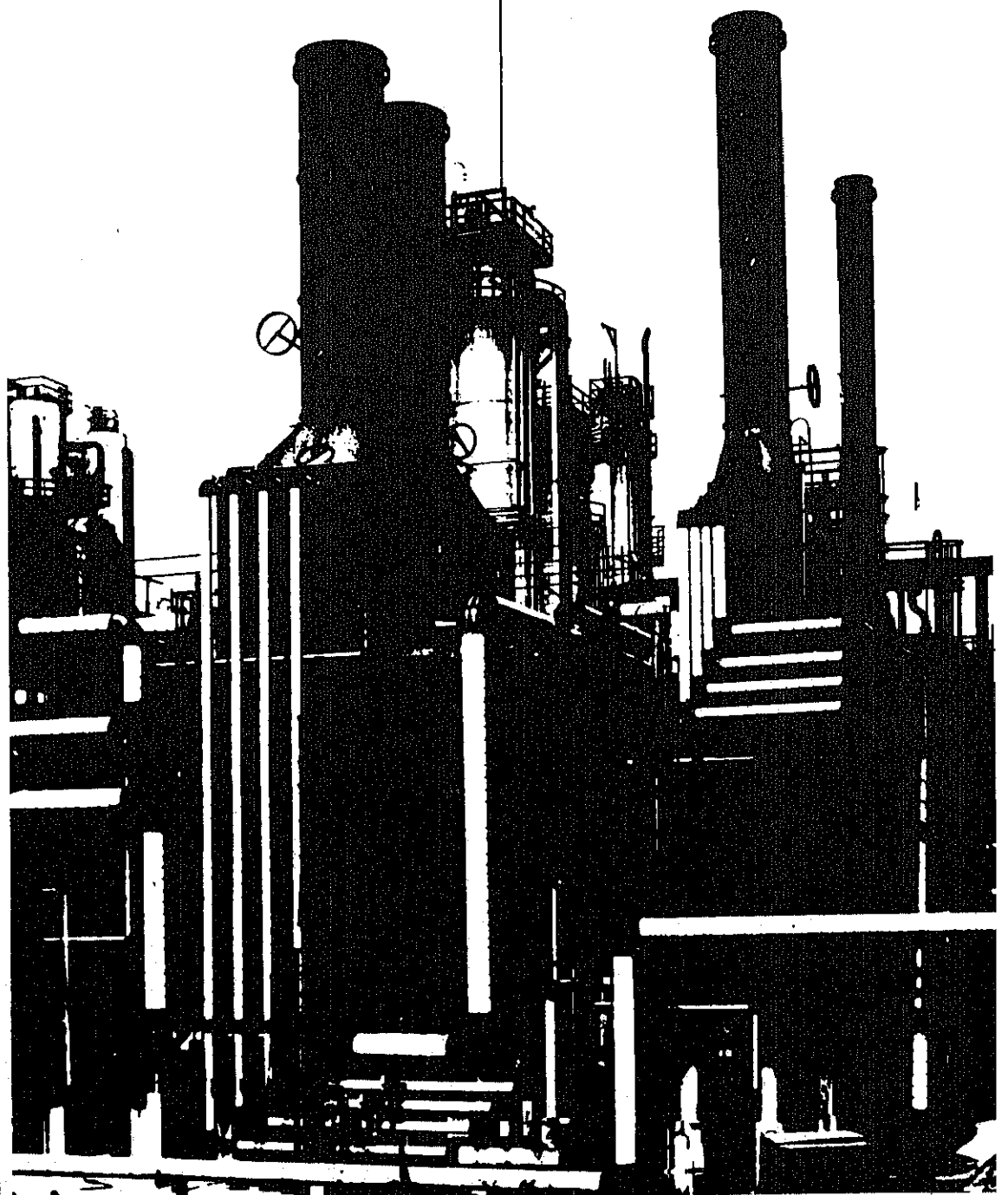
## District Map Oil and Gas Division Railroad Commission of Texas







# Explanatory Notes





## Note 1: Data Collection Methodology

### Background

Beginning in January 1983, the Energy Information Administration (EIA) unified its petroleum supply data collection activities into the Petroleum Supply Reporting System (PSRS). The PSRS represents a family of data collection survey forms, data processing systems and publication systems that have been consolidated to achieve comparability and consistency throughout. The primary focus of the consolidation has been to revise the weekly and monthly survey reporting forms to assure consistency in form layout, preparation instructions, and definitions. As a result, a new set of survey forms were implemented in January 1983. The following are the new form numbers and their corresponding predecessor forms:

New Form Number	Name	Old Form Number
EIA-800	Weekly Refinery Report	EIA-161
EIA-801	Weekly Bulk Terminal Report	EIA-162
EIA-802	Weekly Product Pipeline Report	EIA-163
EIA-803	Weekly Crude Oil Stocks Report	EIA-164
EIA-804	Weekly Imports Report	EIA-165
EIA-805	Weekly Shipments from Puerto Rico to the United States Report	—
EIA-810	Monthly Refinery Report	EIA-87
EIA-811	Monthly Bulk Terminal Report	EIA-88
EIA-812	Monthly Product Pipeline Report	EIA-89
EIA-813	Monthly Crude Oil Report	EIA-90
ERA-60	Monthly Imports Report	ERA-60
EIA-815	Monthly Shipments from Puerto Rico to the United States Report	FEA-P133-M-0
EIA-816	Monthly Natural Gas Liquids Report	EIA-64
EIA-817	Monthly Tanker and Barge Movement Report	EIA-170

Forms EIA-800 through 805 comprise the Weekly Petroleum Supply Reporting System (WPSRS). This system is designed to collect basic refinery operations and product stock data for major products on a weekly basis. Data from the WPSRS are published in the *Weekly Petroleum Status Report (WPSR)* and are also used to calculate the preliminary statistics in the "Summary Statistics" section of the *Petroleum Supply Monthly*

(PSM). A description of the WPSRS survey forms follows in Note 1.1.

Forms EIA-810-813, 815-817 and ERA-60 comprise the Monthly Petroleum Supply Reporting System (MPSRS). These surveys collect detailed refinery operations data, refinery, bulk terminal and pipeline stocks data, crude oil and petroleum product imports data and movements of petroleum products and crude oil between PAD Districts data. These surveys are the primary source of data for the "Summary Statistics" and "Detailed Statistics" sections of the PSM. A description of MPSRS survey forms follows in Note 1.2.

Data are also obtained in magnetic tape form from the Bureau of the Census on a monthly basis. These tapes contain aggregated import and export statistics that are used in the preparation of the PSM. A description of the Census data follows in Note 1.3.

### Note 1.1: Weekly Petroleum Supply Reporting System (WPSRS)

#### Background

The EIA first began publishing weekly petroleum supply statistics in April 1979 in response to the Iranian oil crisis. Initially, the published data were taken from the American Petroleum Institute (API) *Weekly Statistical Bulletin*. However, in January 1980 the EIA began to publish weekly statistics from its own surveys, with the exception of imports statistics which the EIA did not begin collecting until June 1980.

The weekly surveys collect data comparable to those collected on a monthly basis. Selected petroleum companies report weekly data to the EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form EIA-804, the importer of record reports each shipment entering the United States. On Form EIA-805, a company shipping unfinished oils and finished petroleum products into the United States from Puerto Rico reports each shipment. Current weekly data and the most recent monthly data are used to estimate the totals that are published in the *Weekly Petroleum Status Report*.

#### Sample Frame

The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Sampled companies report data only for facilities in the 50 States and District of Columbia.

The sample for each survey is taken from the following universe:

**EIA-800:** Based on the EIA-810 universe, which includes all petroleum refineries in the United States and

its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and plants that produce finished motor gasoline through mechanical blending. The selected sample size is 215.

**EIA-801:** Based on the EIA-811 universe, which includes all bulk terminal facilities in the United States and its territories that have either a total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline. The selected sample size is 93.

**EIA-802:** Based on the EIA-812 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that transport only natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies that transport products covered in the weekly survey are included. The selected sample size is 65.

**EIA-803:** Based on the EIA-813 universe, which consists of all companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-804:** Based on the EIA-814 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico. The selected sample size is 65.

**EIA-805:** Based on the EIA-815 universe, which includes all shippers of unfinished oils and petroleum products into the United States from Puerto Rico. Four companies report.

### Sampling Method

The cut-off method is the sampling procedure used for all weekly surveys except the EIA-802, which uses the monthly universe in its entirety. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous 12-month period. Companies are chosen for the sampling, beginning with the largest and adding companies until the total sample covers 90 percent of the total for the previous time period for each product published in the *Weekly Petroleum Status Report*.

### Collection Methods

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. The report period closes each Friday at 7 a.m. All canvassed firms and terminal operations companies must file by 5 p.m. on the following Monday.

### Estimation and Imputation

After company reports have been checked and entered into the weekly data base, weekly totals for given products are estimated by using the following formula.

The total reported by all companies for the most recent month ( $M_t$ ) is divided by the amount reported by the sample of companies for the most recent month ( $M_s$ ). The result is multiplied by the amount reported by the sample of companies for the current week ( $W_s$ ). The answer,  $W_t$ , is an estimate of the amount that would have been reported by all companies for the current week if all companies reported each week.

$$W_t = \frac{M_t}{M_s} (W_s)$$

This procedure is used to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Therefore, an exponentially smoothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly values and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for unlicensed products because of coverage differences between the monthly imports data and Census data.

Explicit imputation is done for companies which do not respond in a given week. The imputed values are exponentially smoothed means of recent reports from the specific company.

### Response Rates

The response rate for the published estimates is usually between 95 and 98 percent.

## Note 1.2: Monthly Petroleum Supply Reporting System (MPSRS)

### Background

The MPSRS was implemented in January 1983 as the result of an extensive effort to integrate the collection and processing of petroleum supply data that have been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the Bureau of Mines (BOM) began collecting data on refinery operations and crude oil stocks and movements. The collection systems

were further expanded to include natural gas plant liquids production and storage in 1925, imports of crude oil and petroleum products and storage and movements of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS is the first effort to make them all consistent and comparable.

### Respondent Frame

**EIA-810:** All petroleum refineries and plants that produce finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, the Hawaiian Foreign Trade Zone, and Guam. Approximately 313 respondents report on the EIA-810.

**EIA-811:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have a total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline, regardless of ownership of the material. Approximately 328 respondents report on the EIA-811.

**EIA-812:** All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 94 respondents report on the EIA-812.

**EIA-813:** All companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-815:** All licensed importers and importers of record shipping petroleum products from Puerto Rico into the 50 States and the District of Columbia.

Import data from the ERA-60 and EIA-815 are integrated into the import statistics reported in the PSM.

**EIA-816:** All operators of facilities designed to extract liquid hydrocarbons from natural gas stream (natural gas processing plants) or to separate a hydrocarbon stream into its component products, i.e., propane, butane, natural gasoline, etc. (fractionators). Approximately 990 respondents report on the EIA-816.

**EIA-817:** All known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are about 50 respondents.

**ERA-60:** All licensed importers and importers of record importing crude oil and petroleum products into the

United States and Puerto Rico. The respondent universe consisted of approximately 1,100 firms as of July 31, 1982. However, only a selected 250 importers must report each month regardless of import activity. All others must report only for a month in which they actually had imports. The respondent universe for this survey is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

EIA utilizes a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review industry publications such as the *Oil and Gas Journal* and *LP Gas Almanac* for information on facilities or companies going into operation or closing down. These are augmented by articles in newspapers, letters from respondents indicating changes in status and information received from survey systems operated by other offices.

Periodically an extensive survey study is conducted to completely refresh the frames. This involves consolidating information from every known source including State agencies, federal agencies (e.g., EPA, Corps of Engineers, Census Bureau, etc.), and private industry directories. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

### Collection Methods

The data for all of the MPSRS surveys are collected monthly. Completed forms are required to be postmarked by the 20th day following the end of the report month, with the exception of the EIA-815 and ERA-60 which are due 15 work days following the end of the report month. Telephone follow-up calls are made to nonrespondents prior to the publication deadline, for their data. An automated mailing list is maintained and is used to monitor receipt of the forms.

### Imputing Missing Data

Imputation is performed only for nonresponding companies that submitted reports the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by submission of actual data. Data for nonrespondents on the EIA-815 and 817, and ERA-60 are not imputed.

### Response Rates

As of the filing deadline, the response rates of the EIA-810 through EIA-813 respondents is over 90 per-

cent. The response rate for the EIA-816 is over 85 percent and for the EIA-817 it is 98 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Names of companies that fail to file for 2 consecutive months are forwarded for further noncompliance action.

In July 1982, the ERA-60 survey had a response rate of 98 percent by the filing deadline. The universe was 1,100 firms at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard follow-up of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. In addition, response is cross-checked with response on the Petroleum Licensing Decrementation System (PLDS), a listing of each month's importers. The response rate is generally 98 to 99 percent by the time the data are first published.

### **Note 1.3: Census Import (IM-145) and Export (EM-522 and EM-594) Data**

#### **Background**

Each month the EIA purchases magnetic tapes of aggregated import and export statistics from the Bureau of the Census. These data provide the only source of export statistics and are used to augment the import data collected by the EIA. Export statistics and import data from the Census tapes on liquefied petroleum gases, bonded ships bunkers and military offshore use are published in the PSM.

#### **Import Statistics (IM-145)**

##### **Coverage**

The import statistics reflect both government and non-government imports of merchandise from foreign countries into the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise in-transit through the United States, when documented with Customs as an in-transit movement.
2. Shipments from anywhere to U.S. possessions and shipments from U.S. possessions to the United States. (U.S. possessions include Puerto Rico, the Virgin Islands, Guam, and American Samoa.)
3. U.S. merchandise that was held in foreign countries by the U.S. Armed Forces and is returned to the United States for the use of the Armed Forces.

#### **Source of Import Information**

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501, 7505, and 7506).

Imported petroleum is reported as *Imports for Consumption*. Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### **Country and Area of Origin**

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

#### **Export Statistics (EM-522 and EM-594)**

##### **Coverage**

The export statistics reflect both government and non-government exports of domestic and foreign merchandise from the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. All shipments from U.S. possessions, regardless of whether the shipments are sent to the United States, to other U.S. possessions, or to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### **Source of Export Information**

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Exporters are required to file Shipper's Export Declarations with Customs officials. The only exceptions are those exporters who have been authorized to submit data directly to the Bureau of Census on magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations.

## Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 2: Supply

The components of petroleum supply are field production, refinery production, imports, and stock withdrawal or addition:

**Field Production** is the sum of crude oil production (including lease condensate), natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. For further explanation, see Explanatory Note 3.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-816, *Monthly Natural Gas Liquids Report*. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.2.

**Refinery Production** of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. It should also be noted that refineries do not export production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, *Report of Oil Imports into the United States and Puerto Rico*, and Form EIA-815, *Shipments of Refined Products (Including Unfinished Oils) from Puerto Rico to the United States*. In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7505. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases

(LPG), where the Census data show a much higher level of imports than EIA data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and LPGs are not licensed products. Therefore, respondents that import only LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha- and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the same month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and a reduction in the amount of petroleum supplies distributed for domestic consumption. For a description of survey forms used to make stock withdrawal or addition calculations see Explanatory Note 5.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition.

Crude oil supply is the sum of field production, imports and stock withdrawals or additions. Crude oil disposition is the sum of exports, refinery input, losses and product supplied. Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used.

## Note 3: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the State conservation agencies, which collect crude oil production values for tax purposes. The U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of ten State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports



from the State conservation agencies and the U.S. Geological Survey. The ten States that do not report monthly values are Indiana, Kentucky, Missouri, Arkansas, Utah, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 4 months between the end of the reporting month and the time when the monthly COPS information becomes available. Table 11 of this publication provides information on crude oil production for the most recent month for which COPS values are available. In order to present more timely crude oil production values, the EIA's Dallas Field Office prepares a series of State level estimates which are based on historical production patterns and are summed to obtain the monthly crude oil production values shown in the summary statistics of this publication.

The individual State level estimates are either exponential curve fitted projections based on recent data or are constant level projections based on the average production rate during a recent time period. In some cases, adjustments are made to these estimates based on additional information on expected changes in production rates supplied by a State agency, a trade association, or an individual field operator.

#### Note 4: Disposition

The components of petroleum disposition are crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

**Crude Oil Losses** is the sum of crude oil losses at refineries. Crude oil losses at refineries are reported on Form EIA-810, *Refinery Report*.

**Refinery Inputs** of crude oil, natural gas plant liquids, and other liquids are reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published inputs of unfinished oils and of motor and aviation gasoline blending components equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM-522 and EM-594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-810, by refineries located in these places.

**Product supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, minus crude oil losses (plus net receipts when calculated on a PAD District basis), minus re-

finery input, minus exports. This formula ensures that total disposition equals total supply.

**Products supplied** indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) data were misreported or reported late, (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete.

**Product supplied for crude oil** is the sum of crude oil burned on leases and by pipelines as fuel oil. These data are reported on EIA-813, *Monthly Crude Oil Report*. Prior to January 1983, crude oil burned on leases and by pipelines as fuel oil were reported as either distillate or residual fuel oil and included in product supplied for these products.

#### Note 5: Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-810, *Monthly Refinery Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form EIA-800, *Weekly Refinery Report*, and on Form EIA-803, *Weekly Crude Oil Stocks Report*. Primary stocks of petroleum products are summed from data reported on Form EIA-816, *Monthly Natural Gas Liquids Report*, Form EIA-811, *Monthly Bulk Terminal Report*, and on Form EIA-812, *Monthly Product Pipeline Report*. Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-800, *Weekly Refinery Report*, Form EIA-801, *Weekly Bulk Terminal Report*, and Form EIA-802, *Weekly Crude Oil Stocks Report*. For survey descriptions and other details, see Explanatory Notes 1.1 - 1.3.

#### Note 6: Average Stock Levels

The graphs displaying monthly stock levels of crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and other products provide the user with recent data as well as a summary of data from January through December or from July through June for the most recent 3-year period. This summary takes the form of an *average range* that includes seasonal variation determined from a longer time period. The

average range represents the historical pattern; it is not a forecast.

These curves are updated semiannually (on April 1 and October 1), by basing the *average ranges* on a more recent time period. Each 3-year data series is adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of the Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive. The series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels. The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors are very small relative to crude oil stock levels. Therefore, the seasonal factors for distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products are derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors are based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973, 1974 and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3-year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the *average range* is twice this standard error.

The upper curve of the *average range* is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 7: Movements

Movements of crude oil between PAD Districts are reported on Form EIA-817, *Monthly Tanker and Barge Movement Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Petroleum product movements are reported on Forms EIA-817 and EIA-812, *Monthly Product Pipeline Report*. Net receipts is the difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge. For survey descriptions and other detail, see Explanatory Note 1.2.

## Note 8: Preliminary Monthly Statistics

Weekly data (Forms EIA-800, 801, 802, 803, and 804) are used to estimate the most recent monthly values for the *Summary Statistics* section. Since some of the weekly reporting periods overlap two adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To estimate crude oil and petroleum product imports, crude oil input to refineries and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel oil, and residual fuel oil) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the two weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of the earlier of the two weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 3.

## Note 9: Notes on Tables

**Note 9.1 Crude Oil and Petroleum Products Overview** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- Crude losses and Product Supplied appear as labeled in Table 4.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

**Note 9.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.5 Liquefied Petroleum Gases Supply and Disposition** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stocks Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.

- Ending stocks appear in thousands of barrels in Table 2.

**Note 9.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.

- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

#### **Note 9.7 Table 1. U.S. Petroleum Balance**

- Lines (1) through (3): Crude oil (including lease condensate) production for *Alaska, Lower 48 States*, and *Total U.S.* are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 3), and taking the difference to equal production in the Lower 48 States.

- Line (5): *SPR Imports* are reported on Survey Form ERA-60.

- Line (12): *Total Other Sources* equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil minus crude losses in Table 2.

- Line (14): Natural gas plant liquids (NGPL) *Production* equals field production of natural gas liquids (NGL) plus field production of finished petroleum products in Table 2.

- Line (15): *NGPL Imports* equals the sum of the im-

ports of natural gasoline and isopentane, unfractionated stream, and plant condensate imports in Table 2.

- Line (16): *NGPL Stock Withdrawal (+) or Addition (-)* is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate in Table 2.

- Line (17) equals the sum of lines (14), (15), and (16).

- Line (18): *Unfinished oils and gasoline blending components Stock Withdrawal (+) or Addition (-)* equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.

- Line (20): *Other Hydrocarbons and Alcohol New Supply* equals the field production of same in Table 2.

- Line (21): *Refinery Processing Gain* is a balancing item equal to total refinery production minus total refinery input in Table 2.

- Line (23): *Total Other Liquids* equals the sum of lines (18) through (22).

- Line (24): *Total Production of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil product supplied in Table 2.

- Line (25): *Gross Imports of Refined Products* equals imports of LPG plus imports of finished petroleum products in Table 2.

- Line (26): *Exports of Refined Products* equals exports of LPG plus exports of finished petroleum products in Table 2.

- Line (27): *Net Imports of Refined Products* equals the difference between lines (25) and (26).

- Line (28): *Total New Supply of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; minus crude oil product supplied plus imports of LPG and finished petroleum products; minus exports of LPG and finished petroleum products in Table 2.

- Line (29): *Refined Products Stocks Withdrawal (+) or Addition (-)* equals the sum of stock withdrawal (+) or addition (-) for LPG and finished petroleum products in Table 2.

- Line (30): *Total Petroleum Products Supplied for Domestic Use* equals total products supplied in Table 2.

- Lines (31) through (35) equal the respective products supplied in Table 2.

- Line (36): *Other Products Supplied* equals the sum of natural gasoline and isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock use, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, unfinished oils, motor gasoline blending components, aviation gasoline blending components and miscellaneous products supplied in Table 2.

- Line (37): *Total Product Supplied* is equal to total products supplied in Table 2.

- The sum of lines (38) and (39), *stocks of Crude Oil and Lease Condensate (Excluding SPR)* and stocks held by the *Strategic Petroleum Reserve*, equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-813.

- Line (43): *stocks of Refined Products*, equals the sum of LPG and finished petroleum product stocks in Table 2.

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